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Emerging adulthood is a life stage of people between 18 and 25 years and represents a period where people transition from adolescence to adulthood, involving physical, mental, and social changes. In early adulthood, the value system related to sexuality is not fully established, which may increase people's vulnerability when making subjective judgments or choices regarding their sexual behaviors. Additionally, during this period, they often have their first experience of sexual intercourse and engage in sexual activities. Also, they act in the moment, and their sexual urges are stronger than those of people in other age groups. In South Korea, the number of new STD and HIV infection has continued to increase from 2012 to 2016, especially among people in their 20s. From 2015 to 2017, unprotected sex was the most common route of transmission for new HIV cases among young people. In 2014, the prevalence of gonorrhea, chlamydia, and HIV was highest in people between 19 and 34 years old. Additionally, of all newly diagnosed HIV cases in 2017, 33.7% were in their 20s, and this group accounted for the highest proportion. Strategies to address problems related to STD and HIV transmission depend primarily on prevention. Among various contraceptive methods for those in their 20s, the male condom is used most often. Male condoms are considered to be cost-effective, readily accessible, and 85% effective at preventing STDs and HIV. However, condom use has been found to be very low among young people in South Korea. Previous studies showed that about 50-80% of emerging adults still do not use condoms during sexual intercourse.

Based on the literature review, several gaps exist. First, structured sex education tailored to emerging adults is not common in South Korea. Second, there is a limited number of studies examining the components for predicting condom use behaviors among South Korean emerging adults. Third, no study exists that explores the association between gender-driven power dynamics and the decision-making process for condom use in the South Korean context. Therefore, this study aimed to identify predictors of condom use behaviors among female emerging adults in South Korea. This investigation draws on theoretical concepts used in the Theory of Gender and Power (TGP), which includes sexual double standards, sexual assertiveness, and sexual security, and the Theory of Planned Behavior (TPB), which considers attitudes, subjective norms, perceived behavioral control, and barriers (in this case toward condom use). Participants were 170 sexually active, unmarried, heterosexual female college students aged 18–25 years (mean age = 20.97 ± 1.76 years) exclusively in South Korea. A cross-sectional survey was conducted between November 25 and December 5, 2019, using Qualtrics software. Fifteen items were measured on participants' demographic characteristics, including their sexual experience. Next, sexual double standards were measured using the 10-item, 5-point-Likert Double Standard Scale (DSS). Low scores suggest an open and progressive gender standard and a positive outlook on gender equity. Third, sexual assertiveness was measured using the 18-item, 4-point-Likert Sexual Assertiveness Scale (SAS). Higher scores indicate a high ability to initiate sex if desire, refuse unwanted sexual practice or contact, and negotiate condom use to prevent pregnancies and STDs. Fourth, sexual security was measured using the 5-item, 7-point-Likert Global Measure of Sexual

Satisfaction Scale (GMSEX), cross-culturally translated into Korean to measure participants' overall sexual satisfaction. Higher scores indicate high sexual satisfaction during sexual relationships. Lastly, their sexual risk-taking behavior was measured using the cross-culturally translated Sexual Risk Behavior Belief and Self-efficacy scale (SRBBS) to measure participants' attitudes, subjective norms, self-efficacy, and barriers toward condom use. Data were analyzed using descriptive statistics for general characteristics, general sex-related information, predictors, and condom-use behaviors; Spearman's rho was used to determine relationships among predictors. Gamma regression was applied to determine the factors affecting condom use. About half (45.9%) of participants indicated that they always used condoms during sexual intercourse. The sexual double standards score was low ($M = 15.62$, $SD = 4.93$), indicating open and progressive gender standards, and a positive outlook on gender equality. Scores for sexual assertiveness ($M = 60.79$, $SD = 4.56$), attitude ($M = 13.98$, $SD = 2.26$), subjective norms ($M = 13.82$, $SD = 2.44$), and barriers toward condom use ($M = 6.06$, $SD = 1.92$) were moderate. These results suggest participants' moderate ability to (a) initiate sex if desired; (b) refuse unwanted sexual practices or contact; (c) negotiate condom use to prevent pregnancy and sexually transmitted diseases; (d) abstain from risky sexual behaviors; and (e) purchase or carry a condom. Lastly, sexual security ($M = 27.46$, $SD = 5.43$) and self-efficacy toward condom use scores were high ($M = 22.48$, $SD = 3.08$), indicating that participants had high sexual satisfaction during sexual relationships and a strong intention to abstain from risky sexual behaviors. Results showed that sexual double standards and attitudes toward condom use were significantly positively associated with condom-use

behaviors among female college students. In particular, attitudes toward condom use was the stronger predictor of condom use behaviors than sexual double standards. A significant implication of this study is the need for new approaches to addressing condom use in female emerging adults in South Korea. Such approaches should be informed by gender dynamics and should have cultural and social relevance for South Korean society. The current findings inform future interventions tailored to the population to promote condom use and thus preventing STDs/HIV, unwanted pregnancies, abortions, and other negative consequences in female emerging adults in South Korea.

FACTORS AFFECTING CONDOM-USE BEHAVIORS AMONG FEMALE
EMERGING ADULTS IN SOUTH KOREA

by

Jungmin Lee

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Every challenging work needs self-efforts as well as guidance and support of people who were very close to my heart. This work is in loving memory of those who have always inspired me with his drive and will power to never give up. This dissertation is dedicated to my family, to my mentors and committee members, and to anyone who has shown me friendship and kindness during my journey.

APPROVAL PAGE

This dissertation, written by Jungmin Lee, has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

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CHAPTER I

INTRODUCTION

Emerging adulthood is the life stage of people between the ages of 18 and 25. It represents a period where individuals transition from adolescence to adulthood, and it involves physical, mental, and social changes (Alexander, Jemmott, Teitelman, & D'Antonio, 2014; Bae & Kim, 2015; Meena, Verma, Kishore, & Ingle, 2015; Pettifor et al., 2013). In South Korea, as in many other countries, people typically attend college during this developmental stage. Further, young people often begin to engage in romantic relationships during this period. In many cases, these individuals become sexually active due to various factors, including increased sexual drive and comfort with their transition to sexual maturity, completion of this transition, changing peer culture and mores, and living apart from their parents (Y. H. Kim, Moon, & Kang, 2013; E. M. Lee & Kim, 2017). In previous studies on the sexual behaviors and practices of Korean college students, the average age of respondents ranged from 19.24 to 21.8 years (J. H. Kim, Park, & Cho, 2018; I. O. Kim, Yeom, & Kim, 2018; Kwon & Lee, 2018; Min, Lee, Min, & Jeong, 2019). One study reported that the average age of first intercourse was 19.25 years for male students and 19.81 years for female students (M. S. Kim & Eo, 2015), highlighting that, for South Korean emerging adults, the college years represent a time of sexual activation.

According to Erikson's stages of psychosocial development (Erikson, 1963), college students are in stages five and six of development (i.e., identity vs. role confusion and intimacy vs. isolation). During these stages, individuals are expected to develop independence and learn how to cultivate intimate relationships with others (J. E. Lee, Park, & Park, 2013). This is also a period when individuals begin to establish attitudes and beliefs about mature intimacy and sexual behaviors (Alexander et al., 2014). In early adulthood, one's value system related to sexuality is typically not fully established, which may increase vulnerability when making subjective judgments or choices regarding one's sexual behaviors (S. H. Choi, 2016). Students may also be more dependent on—and more easily influenced—by others' opinions, rather than displaying independence and initiative rooted in their own attitudes or values (J. E. Lee et al., 2013).

Compared to high school students, college students can easily participate more in relationships and engage in sexual activity, as they generally are not monitored by their parents (Bae & Kim, 2015; Jo, Kim, & Son, 2014). One study conducted with 388 Korean college students revealed that the occurrence of sexual intercourse in this population increased significantly after college enrollment (Y. J. Kim, 2014). However, engaging in sexual relationships increases students' risk of unintended pregnancy and sexually transmitted diseases (STDs; J. A. Kim & Lee, 2014). For instance, a study of 1,319 Korean college students showed that among students who had engaged in sexual intercourse, 10% reported having had STDs, 17.7% had experienced pregnancy (either the respondent or their sexual partner), and of those who became pregnant, 88.5% had experienced an abortion (either the respondent or their sexual partner) (Jo et al., 2014).

Additionally, research indicates that female college students are more likely than male students to be affected by the long-term consequences of unintended pregnancy and STD infection, including the transmission of STDs to babies during childbirth, infertility, and chronic pelvic inflammation, and this risk continues throughout their later sex lives, relationships, and marriages (J. Y. Lee, 2017; E. M. Lee & Kim, 2017).

Y. J. Kim (2014) found that female students reported higher intention to engage in safe sexual behavior compared to male students, which may be a result of females' increased vulnerability to these risks. According to one study, because risky sexual decisions often occur in situations that involve emotional and motivational influences, young people may be more vulnerable than older people to risky sexual decision-making, owing to their sexual curiosity and lack of impulse control (Goldenberg, Telzer, Lieberman, Fuligni, & Galván, 2013). Indeed, young people often act in the moment, which may lead to unprotected sex (Goldenberg et al., 2013; Victor & Hariri, 2016), and their sexual urges are frequently stronger than those of people in other age groups (E. M. Lee & Kim, 2017). Furthermore, almost half of college students in South Korea reported having sexual intercourse due to curiosity (Shin, Park, & Hong, 2010). Additionally, among 72 female college students, 45.8% had unplanned sexual intercourse, and 8.3% had impulsively engaged in a sexual relationship (H. Y. Kim, 2019). Another study showed that 28.9% of male adolescents and 36% of female adolescents in South Korea did not use contraceptives because they were not readily accessible to them when they were engaging in sex (Hwang & Chung, 2011). Still, the low rates of contraception use among Korean college students has resulted in an increased risk of exposure to various

sexual health problems (G. Y. Cho & Kim, 2014), including STD infection and unintended pregnancies; therefore, more attention must be paid to the facilitation of healthy sexual behavior including condom use among emerging adults in South Korea.

Background and Significance

Although most sexual health problems are preventable, the incidence of HIV and other STDs has steadily increased among South Korean youth, despite national and global efforts to prevent these adverse health outcomes. Indeed, the number of new STD and HIV infections in South Korea have continued to increase, especially among people in their 20s (South Korea Disease Control Headquarters, 2017). Furthermore, people between the ages of 20 and 40 account for approximately 75% of new HIV cases in South Korea (Kwon & Lee, 2018). One report indicated that people in their 20s and 30s account for 63.6% of the total population of individuals reporting non-HIV STD infections in South Korea (S. M. Choi & Yoo, 2013). Given these public health trends, efforts are urgently needed to address this problem among Korean emerging adults. Indeed, obtaining a comprehensive understanding of global trends in sexual health problems and comparing them with the trends observed in South Korea can inform practical interventions to reduce and prevent STD and HIV transmission.

STDs. Worldwide, STDs adversely affect sexual and reproductive health and represent one of the top five categories for which people seek health care (World Health Organization [WHO], 2014a). According to the WHO (2014a), over one million people are infected with STDs daily. Global trends show that the prevalence of STD infections is increasing, with young people exhibiting the highest incidence rates among all age

groups (Cheung, Montgomery, & Benjamins, 2015). Research indicates that young people aged 16 to 24 are at higher risk for developing STDs compared to older adults (Subbarao & Aknilesh, 2017). In fact, of the 20 million new STD cases each year, young people aged 15 to 24 account for nearly half of these cases (Satterwhite et al., 2013). Similar trends have also been observed in South Korea. For instance, in a South Korea National Institute of Health report (2016) on the prevalence of STDs in South Korean women from adolescence to old age, the prevalence of gonorrhea, chlamydia, and HIV was highest in women between 19 and 34 years in 2014. Of note, untreated STDs can have serious long-term health consequences (WHO, 2017), including pelvic inflammatory disease, infertility, ectopic pregnancy, malignancies, and perinatal or congenital infections in infants born from infected mothers (Subbarao & Akhilesh, 2017). Furthermore, a young adult's future sexual life and sexual and nonsexual health may also be affected by the long-term consequences of STDs (Dittus et al., 2015). Ultimately, the heightened risk of STDs in the college-age population means it is critical to have proper precautions and measures in place for young adults.

Despite the global emphasis on STD prevention, the rate of STD infection in South Korea continues to rise among young people. For example, the number of people infected with STDs increased by 1.45% from 2012 to 2016, while the number of infected people aged 20 to 30 increased by 2.5% (i.e., from 3,000 in 2012 to 7,600 in 2016) (A. S. Jeong & Kim, 2018). One study on South Korean adolescents aged 12 to 19 found that 64.1% ($n=152$) had engaged in sexual intercourse, of whom 75% ($n=114$) had been infected with one or more STDs (Park, Seo, Jeong, & Lee, 2017). Similarly, J. A. Kim

and Lee (2014) showed that 65.5% ($n=368$) of college students in South Korea had engaged in sexual intercourse, and 37% ($n=209$) of them had engaged in sexual behavior that may have placed them at risk for STD infections, such as having sex with multiple partners, not using condoms, or both.

HIV/AIDS. Although the total number of new HIV cases worldwide is decreasing, the number is steadily increasing among young adults. In the United States, youth between 13 and 24 years accounted for 21% of all new HIV diagnoses in 2017, with individuals between the ages of 20 and 24 exhibiting the highest number of HIV infections (Centers for Disease Control and Prevention [CDC], 2019b). Similarly, the South Korea Disease Control Headquarters (2017) reported that of all newly diagnosed HIV cases in 2017, people in their 20s accounted for the highest proportion of cases at 33.7% (i.e., 340 cases), followed by people in their 30s at 22.8% (i.e., 230 cases). Combined, these age groups accounted for 56.5% of total cases. In South Korea—from 2015 to 2017—every new case of HIV/AIDS was sexually transmitted (South Korea Disease Control Headquarters, 2017), indicating that the most common route of HIV infection among young people is unprotected sex (AVERT, 2018).

The frequency of sexual intercourse without using condoms is higher among young people than other age groups, increasing their risk of HIV infection (J. Y. Cho, Han, & Song, 2006). Suggested methods for preventing HIV transmission include avoiding risky sexual behaviors, utilizing appropriate prevention methods and treatments for STDs, and encouraging condom use (Kwon & Lee, 2018). Unsafe or risky sex refers to sexual intercourse without using condoms or other contraceptive methods, outside the

context of a monogamous relationship, and/or sex with older partners and substance use before engaging in sexual behavior, which can increase the risk of HIV infection (AVERT, 2019a; CDC, 2019a). Nevertheless, some college students engage in high levels of unsafe sex with multiple partners, along with other risky sexual behaviors (Liu et al., 2014).

A lack of STD/HIV awareness and sexual health knowledge is a key barrier to the reduction of sexual health problems (AVERT, 2018). Indeed, individuals who have less sexual experience and knowledge are at an increased risk for various sexual health problems, compared to those with more experience and knowledge (Meena et al., 2015). This, in turn, is made worse by their lack of knowledge and awareness of the consequences of risky behavior (Baruah, Das, & Sarkar, 2016), as discussed above. One study that included a sample of 322 male college students in South Korea found that more than half of HIV-infected youth were unaware of their status and could, therefore, unknowingly infect others with the virus. If present trends continue, this could contribute to a 54% to 74% increase in new HIV infections in the country (Kwon & Lee, 2018). Even if young people acknowledge the seriousness of STDs/HIV, few think they are at risk, and many do not seriously consider the necessity for STD prevention, nor do they view STDs and HIV/AIDS as a personal threat (Guo et al., 2014; H. S. Lee, 2002). Moreover, given that many STDs are asymptomatic, young people (and others) may be unaware of the need for screening or treatment (Da Ros & Schmitt, 2008). Thus, it is necessary to increase young people's knowledge and awareness of STDs and the HIV/AIDS epidemic.

Sex education among college students. The provision of adequate information about STD/HIV transmission and safe sex practices can prevent youth from contracting HIV and thereby counteract the AIDS epidemic (The United Nations Children's Fund, 2003). Consequently, it is crucial to provide young people with the necessary information to protect themselves against STDs, HIV, and AIDS. Most STDs are acquired through unprotected sexual intercourse with infected partners; therefore, effective contraception education should be provided to emerging adults who are becoming more sexually active to increase the rate of contraception use and reduce the transmission of STDs through safer and more reliable contraception (South Korea National Institute of Health, 2016). However, previous studies have shown that mandatory sex education in middle and high school in South Korea is largely ineffective, thus providing little useful information (J. H. Choi, Kim, & Shin, 2010; I. O. Kim et al., 2018). Of note, South Korean college students are generally dissatisfied with the sex education programs they received in high school, mainly due to the monotonous and formal nature of the education (Yeom & Kim, 2018). Not only is sex education in South Korean middle and high schools primarily reliant on a lecture format and reviewing extensive information on sexual education over a brief period (J. H. Choi et al., 2010), but teachers also tend to avoid more sensitive topics related to sexual and reproductive health (Muhwezi et al., 2015). Research has demonstrated that the demand for sex education content on healthy reproductive care—including information on contraceptive methods and the prevention of STDs/HIV—is highest among young people (Do & Seo, 2013; Song & Chae, 2010; Yeom & Kim, 2018). Therefore, efforts are needed to develop and provide systematic and realistic education

that is consistent with the needs of students so that these young people can improve their ability to prevent sex-related problems—such as unwanted pregnancies and STDs—and to increase responsible sexual behaviors.

South Korean college students still experience challenges accessing necessary sex information (Yeom & Kim, 2018) and, given that they often lack the opportunity to access systematic sex-related information either before or after entering college, they tend to have insufficient knowledge and awareness of safe sex methods (Song & Chae, 2010). Without structured sex education programs, college students may be unable to obtain the information they need (Yeom & Kim, 2018). This lack of accurate, practical, and in-depth information may prevent young adults from making responsible decisions (Muhwezi et al., 2015), thus increasing their risk-taking behavior. Additionally, after entering college, young people are less connected to organized prevention efforts (O’Sullivan, Udell, Montrose, Antonello, & Hoffman, 2010) and are hesitant to ask for information (Subbarao & Akhilesh, 2017).

Most Korean youth report that they tend to obtain sex-related information from the Internet (Hong & Hwang, 2013; N. H. Kim, Park, & Jung, 2015). Given that the Internet is easy to access and youth can express their interest in sex without revealing their identity (J. A. Kim & Lee, 2014), the Internet may provide opportunities for young people to have indirect sexual experiences that do not necessitate the physical presence of a partner or partners. However, the issue remains whether youth are exploring appropriate sources that will enable them to make educated decisions regarding their sexual behaviors (Jaung, Jung, & Kim, 2015), as the variety and mixed reliability of content on the Internet

could confuse or distort attitudes and beliefs regarding safe sexual behavior (E. M. Kim, Yu, & Song, 2013).

In South Korea, the growth of mass media and an open culture regarding sex and sexuality has rapidly changed young people's attitudes, values, and behaviors over the past decade (E. M. Lee & Kim, 2017; Yang, 2012), and this change has been associated with engagement in riskier sexual activities (Y. J. Kim, 2014). Indeed, young people's sexual expression and sexual behaviors are becoming more uninhibited, and owing to this sexual openness, South Korean youth are more receptive to sexual experiences (Do & Seo, 2013; K. H. Kim & Cho, 2016). The rapid development of information media and the lack of accurate information about sex has led to a change in young people's conceptualization and consciousness of sex, thereby increasing their confusion regarding sexual attitudes and beliefs (J. H. Choi et al., 2010; Y. J. Kim, 2014). Moreover, despite the increasing autonomy of college students, their sexual identity and values are not yet fully established, which may cause confusion and lead to irresponsible sexual practices as they initiate sexual relationships (J. H. Kim et al., 2018). College students may also make decisions based on false information if accurate information is unavailable or misunderstood (Do & Seo, 2013; Stanger-Hall & Hall, 2011). If clear information about safer sex is provided to young people, their knowledge and awareness regarding their choices before having sex, including the use of contraception, should increase. The goal of preventive information, then, is to help college students develop the optimal knowledge, attitudes, beliefs, and skills needed to engage in healthier and safer sexual decision-making processes.

Problem Statement

There is an immense need for interventions that prevent sexual health problems among South Korean college students. Previous studies have shown that the prevalence of sex-related health problems in this population is increasing due to increased engagement in unprotected and risky sexual behavior (J. A. Kim & Lee, 2014; E. M. Lee & Kim, 2017).

According to a South Korea National Survey conducted in 2015, the average age of first sexual intercourse was 22.8 years (South Korea Disease Control Headquarters, 2015). Globally speaking, previous research has shown that people under the age of 25 are vulnerable, in part, because they may have more than one sexual partner successively or concurrently, and their rate of having multiple partners is higher than that of the general population, which can increase their risk of developing STDs, including HIV (Idele et al., 2014; Mmbaga, Leonard, & Leyna, 2012; Vasilenko & Lanza, 2014). This risk is further exacerbated when these individuals do not use contraception, as is frequently the case. For example, 51% of college students in the United States reported having sexual intercourse with one or more partners in the past 3 months, and of those, 9% reported not using condoms (Asare, 2015). Hwang and Chung (2011) reported that 85.4% of male students and 56.1% of female students in a South Korean sample had engaged in sexual intercourse in the past, with only 24.9% using contraception (H. K. Lee, 2010). However, there are limited data on the incidence of multiple sexual partners within a given period among South Korean college students. This is concerning, as such data can serve as an indicator of sexual health risk. Indeed, in one study of college

students, the average number of sex partners was 4.8 ($SD = 7.81$), but half of the participants responded that their frequency of sexual intercourse was five to ten times (Shin, Park, Bae, & Cha, 2010). Therefore, it is not known what the incidence of multiple sexual partners is in this population or how many partners people have during their college years.

Worldwide, gendered power dynamics are viewed as important factors in sexual and reproductive health behaviors and outcomes (Haberland, 2015; Jewkes & Morrell, 2010). As sexual health problems may be considered as both a consequence and a cause of gender inequalities, and negatively affect the health of the individual as well as the community, various international organizations are committed to the prevention and eradication of such inequalities. Hence, efforts to improve gender and power equality in sexual relationships occur at all levels, from individual to national (Haberland, 2015; Jewkes & Morrell, 2010).

In the past, gender-based power inequalities were more entrenched in South Korea due to the country's Confucian-based, male-dominated ideology and patriarchal system. However, the country's Gender Inequality Index (GII) decreased (indicating lower inequality) from 0.310 to 0.063 between 2010 and 2017 (South Korea Ministry of Gender Equality and Family, 2018). The GII measures the level of gender inequality in a country to raise awareness of the disadvantages faced by women and to monitor improvement concerning gender equality goals. Although South Korea's GII score has been on the decline, gender and power issues related to Confucian patriarchy and male domination still exist and affect society today; thus, efforts to resolve gender inequality in

terms of gender norms, power in sexual relationships, and intimate partner violence continue (Haberland, 2015; South Korea Ministry of Gender Equality and Family, 2018; South Korea WomenLink, 2018).

Concerning sexual relationships, power inequalities based on gender also remain a major social issue in South Korea, and women continue to have less power in sexual relationships than men (AVERT, 2019b; South Korea WomenLink, 2018). In this regard, the purpose of the present study is to identify the determinants of condom-use behaviors among female emerging adults in South Korea from the perspective of gender-driven power dynamics. In this way, this study aims to explore and understand condom-use behaviors among this at-risk population. Though separating genders may entrench people's views regarding gender inequalities (e.g., by reinforcing binary notions of gender roles and relationship power dynamics), previous studies showed that women tended to have less power and control compared to men. In the present study, the separation of genders will serve to clarify issues uniquely experienced by this population, bringing into focus systemic constraints that place this group at risk for STD infection.

Furthermore, a report from the South Korea National Institute of Health (2016) emphasized the need to focus on the young female population over the male population to prevent STDs and HIV, as the number of women treated for STDs is increasing every year in South Korea. More specifically, findings indicate that the number of adult women over 19 years treated at hospitals for chlamydia was quite high at 255.6 per 100,000 people in 2014, as compared to 95 per 100,000 people in 2005, which is—an almost three-fold increase within 10 years (South Korea National Institute of Health, 2016).

Additionally, among people treated for STDs (especially gonorrhea and chlamydia) and HIV at hospitals, women between 19 and 34 years showed the highest prevalence (South Korea National Institute of Health, 2016), further strengthening the rationale to focus only on women in the current study. Findings from the current study may inform the design of gender- and culturally-appropriate interventions in future studies that target South Korean emerging adult females, and will contribute to our understanding of sexual behavior more broadly.

Efforts to Address the Existing Problem

Strategies to address problems and challenges related to STDs, including HIV, depend primarily on prevention (Ramiro, Reis, de Matos, & Diniz, 2014). There are various contraceptive methods that young people can use during sexual intercourse. It is widely known that one of the most effective strategies for preventing sexual health problems is the promotion of condom use. Avoiding risky sexual behaviors and using condoms when engaging in vaginal, anal, or oral sexual intercourse can prevent the transmission of STDs/HIV (CDC, 2016). Condoms are considered crucial, cost-effective, and readily accessible for the prevention of STDs and HIV in Western culture (Farrington, Bell, & DiBacco, 2016; Widman, Noar, Choukas-Bradley, & Francis, 2014), and their use has been shown to decrease the likelihood of being infected with STDs during sexual intercourse in a South Korean college context (A. S. Jeong & Kim, 2018).

In South Korea, the most frequently used contraceptive method was condoms among young people (S. M. Gu, 2017; Jo et al., 2014). However, relative to public health targets among young people worldwide, condom use appears to be quite low in South

Korea. In J. Y. Lee's (2017) study conducted on 743 female youth in South Korea, it was found that only 25% to 38.2% of young South Korean women had used adequate contraception, including condoms, in the past year (J. Y. Lee, 2017). Another study showed that 17.1% of Korean male and female youth aged 12 to 19 reported having STDs in 2017 (Park et al., 2017). In this regard, despite changes in sexual openness, contraceptive practices are still lacking in this target population.

Moreover, even when young people do use condoms in South Korea, consistency of use is low. According to one study, only 31.9% of youth responded that they always used contraception during sexual intercourse, while 13.5% of them responded that they used contraception to some extent and 54.6% responded that they did not use contraception at all (M. Y. Kim & Cho, 2012). Similar results have been found in other samples of youth in South Korea (I. S. Lee, Park, & Lee, 2006; Song & Chae, 2010).

Purpose of the Study

The purpose of the present study is to examine factors (i.e., sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, and barriers) affecting condom use behavior among female, heterosexual, unmarried college students in South Korea. This investigation draws on theoretical concepts used in the Theory of Gender and Power (TGP), which includes sexual double standards, sexual assertiveness, and sexual security, and the Theory of Planned Behavior (TPB), which considers attitudes, subjective norms, perceived behavioral control, and barriers (in this case toward condom use). These theories are discussed in more detail below. On this basis, we can determine the usefulness of the TGP and TPB in informing an effective

intervention model to encourage condom use and reduce risky sexual behaviors among South Korean college students.

The specific aims of this study among female South Korean college students are to examine (a) demographic characteristics, sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, and barriers toward condom-use behaviors; (b) relationships among independent and dependent variables, namely sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, barriers, and condom-use behaviors; and (c) predictors of condom-use behaviors.

At present, little is known about factors influencing South Korean college students' decisions regarding condom use, and research is needed to identify and explore these factors. Thus, in the present study, current condom-use behaviors were targeted to clarify motivational factors, as we cannot directly measure an individual's future sexual behavior.

Theoretical Framework

Theory of gender and power (TGP). According to the definition by the WHO (2014b), sexual health is

a state of physical, mental and social well-being in relation to sexuality, which requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination, and violence. (para. 1)

To maintain sexual health, sexual autonomy, the ability to make free choices in sexual relations, is needed. This need should be considered in the formation of healthy and

responsible sexual behavior, especially in college students who are in the early stages of adulthood and are only beginning to establish their sexual attitudes and values (G. Y. Cho & Kim, 2014). Therefore, in the present study, Connell's (1987) TGP was used to guide the explanation of condom-use behaviors among female college students through the lens of gender dynamics and the role of relationship power. The current study provided findings that have cultural and social relevance for South Korean society.

The TGP is a social structural theory based on existing theories that explain sexual inequality, gender, and power imbalances in different societies (Wingood & DiClemente, 2000). It highlights the impact of gender, power, and culture on risky sexual behavior and proposes that the following attributes have profoundly influenced the risks of STDs and HIV among women: (a) sexual division of labor; (b) structure of affective attachments and social norms; and (c) sexual division of power (Wingood & DiClemente, 2000). These three concepts can more broadly explain the status of sexual, gender, and power inequalities, and are essential for understanding the risk of no condom use and STD/HIV transmission among the young female population. Thus, in this present study, we used two concepts from TGP: sexual division of power and structure of cathexis because they are deemed relevant to the phenomenon of interest.

Sexual division of power. Sexual division of power underlies behavioral risk factors that are important for preventive behavior, such as consistent condom use during sexual intercourse. Here, behavioral risk factors can be conceptualized as women's lack of control or power to avoid unhealthy behavior (Wingood & DiClemente, 2000). For example, poor communication between partners, insufficient condom-use skills, and/or

lack of self-efficacy for condom use may restrict control over condom use among women. Women who are exposed to these factors may have less power to practice safe sex behavior because they are less likely to have authoritative influence and control in their relationships.

Traditional gender norms and power imbalances in intimate relationships can indirectly or directly increase vulnerability not only to non-use of condoms but also to intimate partner violence (Stokes & Brody, 2019). Notably, sexual violence is often caused by unilateral coercion during dating, and often committed by dating partners (Shim, Lee, & Oh, 2012). The rate of reported dating violence in Korea has increased from 16.2% in 2016 to 19.9% in 2017 (Statistics Korea, 2018a). It is noteworthy that dating violence has increased in the same period that the GII score has improved, perhaps indicating that gender inequality and intimate partner violence are not as directly or simplistically linked to each other as once thought. The perpetrators of intimate partner violence were mostly males, and people in their 20s were more likely to experience intimate partner violence than other groups (Statistics Korea, 2018b; Yonhap News Agency, 2016). This is an important aspect to consider, as previous studies conducted in African countries and in India showed that women who had been sexually coerced by male partners exhibited a higher prevalence of HIV (Jewkes & Morrell, 2010), with similar findings in South Korea. According to E. S. Lee and Kang's (2010) study, women who held greater rigid or traditional gender norms exhibited lower sexual assertiveness and self-efficacy in relationships, resulting in a higher probability of experiencing sexual violence committed by their partners. Moreover, individuals with low sexual

assertiveness are also more vulnerable to the physical and psychological damage caused by unwanted sexual practices, and they are less able to act or make decisions on their own during sexual intercourse (S. H. Choi, 2016). Therefore, sexual assertiveness may protect women against unwanted or unsafe sexual experiences, as measured in previous studies (Y. H. Kim et al., 2013).

Structure of cathexis. The structure of affective attachments and social norms is maintained by social mechanisms, such as the biases people have about how women and men should express their own sexuality (Wingood & DiClemente, 2000). These biases lead to the emergence of cultural norms, gender roles, and stereotypical beliefs that influence one's perceptions of sexuality. Importantly, biases that restrain women's sexuality are still prevalent in South Korea (e.g., women should not be pregnant before marriage, should wear modest and tidy clothing, and should not walk around alone late at night in dangerous areas). There are similar biased expectations related to condom use. For example, according to a study by Hwang and Chung (2011), Korean college students responded that others' stares or perceived judgment were barriers when attempting to purchase or obtain condoms. According to an influential Korean newspaper article, individuals who carry condoms are considered to be sexually promiscuous rather than cautious people who are taking care of themselves (Maeil Business Newspaper, 2016).

In South Korea, women are traditionally expected to play a passive role, while men are expected to be proactive and active (J. H. Kim et al., 2018). Traditional gender norms which have prevented women from flatly rejecting men who make sexual overtures, render women vulnerable to unwanted sexual encounters (E. M. Kim et al.,

2013; Shim et al., 2012). Thus, the South Korean gender double standard and patriarchal system have created more permissive standards for men and stricter standards for women around sexual practices (J. H. Kim et al., 2018). According to a study conducted in unmarried young people in South Korea, women with rigid patriarchal gender norms often did not insist on contraception and displayed passive sexual behavior, whereas women with flexible gender norms showed positive attitudes toward contraception and exhibited higher contraceptive self-efficacy (Hwang & Chung, 2014).

Moreover, previous studies have revealed that, globally, women have less control over decisions regarding risky sexual behavior and condom use, as compared to men (Beadnell, Baker, Gillmore, Morrison, Huang, & Stielstra, 2007; Lefkowitz, Shearer, Gillen, & Espinosa-Hernandez, 2014). Importantly, differences in relationship power can prevent a person from successfully negotiating the use of condoms for safe sex, because these decisions depend on whether the partner with more power wants—or demands not—to use a condom (Farrington et al., 2016). Women with more power in their relationships are more likely to consistently use condoms than women with less power (Pulerwitz, Amaro, De Jong, Gortmaker, & Rudd, 2002). Furthermore, Y. H. Kim et al. (2013) reported that women with high sexual assertiveness scores were less likely to have unsafe/risky sexual intercourse with their partners. To our knowledge, no study exists exploring the association between relationship power and condom use in South Korea. As power imbalance in sexual relationships still exists, and given that men usually take the lead in sex-related decisions in South Korea (Y. J. Kim, Lee, & Lee, 2019), efforts are needed to further understand power imbalances and their relationship to sexual

assertiveness for condom use in women in particular. In this regard, findings from the current study contributed to baseline information for use in the development of targeted interventions for the future.

In sum, traditional gender norms and power imbalances in relationships can indirectly or directly increase women's vulnerability to condom non-use. Furthermore, female college students often face serious social challenges, including abortion, single motherhood, and STDs, as a result of decisions on sexual relations made with their partners under some degree of duress (Chun, 2012). When women make sexual decisions based on past relationship experiences, it may influence their current sexual behavior—a phenomenon observed more often among women than men (Alexander, 2012; Alexander et al., 2014). Thus, the present theoretical framework and investigation helped generate new knowledge in the area of female sexual relationship patterns and power imbalances related to condom use in South Korea and can help health care providers design gender- and culturally-appropriate interventions in future studies.

Theory of planned behavior (TPB). In previous studies, TPB has frequently been used to understand, predict, and change risky sexual behavior in at-risk populations, and to explain the decision-making process for condom use among young people. TPB was developed by Ajzen (1991) in an attempt to predict a person's specific behavior (Ajzen, 1991; Asare, 2015), and is also known as behavioral prediction theory. TPB was developed by applying perceived behavioral control (PBC) to address the limitations of the theory of reasoned action (TRA; Fishbein & Ajzen, 1975) and to specifically account for non-volitional behavior (i.e., health behavior that is not under the individual's

complete control), which was not previously considered by the TRA (Fishbein & Ajzen, 1975). In both theories, behavior is defined as a specific action that is performed by an individual, is encountered as a function of the behavioral readiness to perform a given behavior, and has PBC (Ajzen, 1991; Fishbein & Ajzen, 1975). If this is the case, the logic of one's behavioral changes lies in the assumption that changes in readiness to perform a given behavior will ultimately produce the corresponding behavioral change. Readiness to perform a given behavior reflects the motivational factors that influence that behavior and the individual's willingness to make an effort to reach a behavioral goal (Ajzen, 1991; Chen, Stanton, Chen, & Li, 2013), which is influenced in turn by attitudes toward the behavior, subjective norms, and PBC.

Attitudes toward the behavior. An individual's behavior can be determined by his or her attitudes toward a behavior. Attitudes are defined as positive or negative evaluations of a particular behavior (Fishbein & Ajzen, 1975). An attitude toward a behavior is determined by *behavioral beliefs*, more specifically, the individual's *evaluation of the outcome* (i.e., positive or negative consequences) associated with the behavior and by the strength and value of the association (i.e., how good or bad it is) (Ajzen, 1991; Fishbein & Ajzen, 1975). In turn, attitudes are the result of beliefs about the likelihood of specific outcomes of behavioral performance and specific evaluations of these outcomes. The underlying assumption is that if attitudes toward the behavior are evaluated positively, they will also positively correlate with the readiness to perform a given behavior and with subsequent action regarding the behavior (Ajzen, 1991). For instance, if individuals have a more positive attitude toward condom use and believe that

using condoms will have a more positive outcome for their sexual health, they may increase their readiness to perform that behavior (i.e., to use condoms).

Subjective norms. The second determinant of behavior is subjective norms, which are defined as the individual's beliefs about whether significant others think a behavior should or should not be performed (i.e., *normative beliefs*), along with the individual's willingness to comply with the perceptions of the significant referents (i.e., *motivation to comply*; Ajzen, 1991; Fishbein & Ajzen, 1975). Subjective norms can be understood as a perceived social pressure that is felt when engaging in a specific behavior that is influenced by parents, peers, social/cultural norms, and sexual partners' norms (Chung & Rimal, 2016). The underlying assumption is that if individuals believe their referents (e.g., parents, peers, partners) would approve of a specific behavior and if they want to behave in the way their referents want them to, they are more likely to engage in that behavior (Ajzen, 1991).

Positive subjective norms around condom use result from the perception that important referents favor the use of condoms and the individual's willingness to comply with these expectations. If a person perceives that their peers want them to use condoms, and the person wants to adhere to their peers' social norms, they are more likely to use condoms; however, if they perceive that their peers want them to use condoms, but they are not willing to follow their peers' social norms, they are less likely to use condoms. Previous studies showed that social norms were one of the most significant predictors of the readiness to perform a given behavior (i.e., to use condoms) among youth (Sacolo et al., 2013; Widman, Choukas-Bradley, Helms, & Prinstein, 2016).

Perceived behavioral control. PBC is defined as an individual's belief that a given behavior is under his or her control (Ramírez-Correa & Ramírez-Santana, 2018). The underlying assumption is that an individual's actual performance of a particular behavior not only depends on the person's motivation to perform the behavior but also on the extent to which he or she controls the performance of the behavior (Ajzen, 1991). The PBC consists of two constructs. The first construct is the individual's beliefs related to having the resources, opportunities, and skills to perform a particular behavior (*control belief*), which might facilitate or impede performing the behavior. The second construct involves overcoming barriers or obstacles that prevent the individual from performing the behavior (*perceived power*; Ajzen, 1991). Unlike the psychological constructs (i.e., attitudes toward a behavior and subjective norms) discussed above, there is a direct association between PBC and an individual's actual behavior (Ajzen, 1991).

PBC is often used interchangeably with self-efficacy (Parkinson, David, & Rundle-Thiele, 2017), which is the main construct in social cognitive theory (Bandura, 1986). The PBC concept is consistent with Bandura's definition of self-efficacy and pertains more strongly to intention than to behavior (Cha, Kim, & Patrick, 2008). Self-efficacy refers to one's degree of confidence in one's ability to perform a particular behavior, even when faced with obstacles (Strecher, DeVellis, Becker, & Rosenstock, 1986), and is closely linked to gender and power imbalance (Closson et al., 2018; Mpondo, Ruiter, Borne, & Reddy, 2015). Self-efficacy has been identified as one of the most critical components for predicting condom-use intention and actual condom use among college students (Oppong, Osafo, & Doku, 2016). However, some studies

conducted in South Africa showed that unequal power dynamics in a relationship reduce women's negotiation power for condom use, and the intention to use condoms does not always translate to actual condom use (Closson et al., 2018; Mpondo et al., 2015).

Intention. When accounting for the constructs discussed above, TPB posits that an individual's intention to engage in a particular behavior is a key factor in determining whether a behavior occurs (Ajzen, 1991). However, intentions do not necessarily translate into actions, and intentions may change with experience and education. For example, contraceptive intentions of college students with sexual experience did not affect their actual contraception behavior (Hwang & Chung, 2011). Accordingly, this study did not include condom-use intention to adequately explain condom-use behaviors because condom-use behaviors are not solely due to individuals' will and intention, but can be changed by interpersonal, sociocultural, and environmental factors. Thus, individuals may intend to use condoms but be unable to buy and carry condoms. Therefore, the difference between intention and actual behavior should be considered (K. E. Lee, 2014). It is not yet clear whether one's intention to use condoms will also predict South Korean college students' actual condom-use behaviors. In this regard, rather than measuring individuals' intention to use condoms, the present study modified the TPB by directly measuring current condom-use behaviors.

Overall, the TPB mainly focuses on conceptualizing the determinants of safe sexual behavior but also includes social and cultural contextual aspects, which can magnify the impact of these factors (e.g., on young women in Asian culture). Therefore, the TPB, which includes factors that could predict South Korean college students'

condom-use behaviors, seems to be an appropriate framework for the present study. Indeed, the TPB perspective will make it simpler to understand complex phenomena related to (un)safe sexual behaviors (such as condom use) in young people, which could inform future interventions aimed at minimizing the risky sexual behaviors of Korean college students, reduce STD/HIV transmission among them, and inform interventions in different parts of the world. The illustrated schematic model of the present study is shown in Figure 1. Based on the theoretical framework, it was hypothesized that sexual double standards, sexual assertiveness, and sexual security (TGP concepts) predicted condom-use behaviors among female emerging adults in South Korea. Also, attitudes, subjective norms, self-efficacy, and barriers toward condom use (TPB concepts) predicted condom use behaviors among the target population. The long-term goal is to prevent new STD/HIV transmission among the target population.

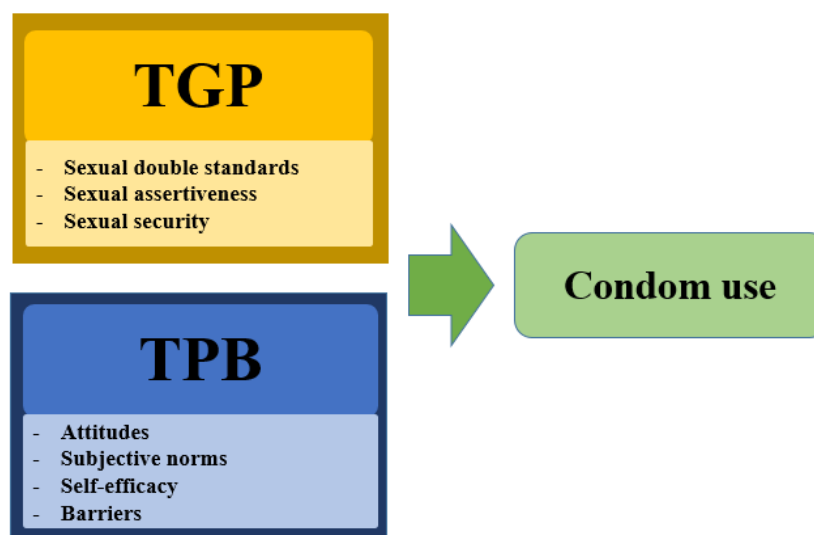


Figure 1. Tailored Theoretical Framework Based on TGP and TPB.

Assumptions

The following assumptions were made in the planning and implementation of the present study:

- Sexually active college students are at risk for sexual health problems, such as STDs and HIV, which necessitates condom use for preventive purposes.
- Condom-use promotion is one of the most effective strategies for preventing STD/HIV infections.
- Knowledge is a weak and inconsistent predictor of individuals' behavioral changes.
- Individuals' current condom-use behaviors more directly predict their readiness—and action—toward performing a given behavior (i.e., to use condoms) than their intention to use condoms.

Research Questions

Among female emerging adults in South Korea: (a) What are their demographic characteristics, sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, and barriers toward condom-use behaviors; (b) What are relationships among independent and dependent variables, namely sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, barriers, and condom-use behaviors; and (c) What are predictors of condom-use behaviors?

Definition of Terms

This study employs the following terms and definitions:

1. **Sexual double standards.** Sexual double standards refer to differences in criteria for male and female sexual acceptability and freedom of action in sexual situations (J. H. Kim et al., 2018; Y. J. Kim et al., 2019). In the present study, sexual double standards are defined as gender norms or attitudes toward sex that shape individuals' perceptions of sexual behaviors, which create different standards for men and women. The term gender-role stereotype has been used interchangeably with sexual double standards in the literature. Thus, we used the term sexual double standards consistently throughout the paper.
2. **Sexual assertiveness.** Sexual assertiveness is the capacity to protect oneself in unwanted or unsafe sexual situations and to attain sexual autonomy (E. S. Lee & Kang, 2010). In the present study, sexual assertiveness is defined as the power to initiate sex if desired, refused unwanted sexual practice or contact, and negotiate condom use to prevent unwanted pregnancies and STDs.
3. **Sexual security.** Sexual security is a state of emotional well-being that could influence individuals' decision-making and negotiation skills in a sexual relationship (Alexander, 2012). In the present study, sexual security is defined as women's sense of being sufficiently empowered to make decisions and to negotiate with their partners.

4. **Attitudes toward condom use.** Attitudes are an individual's positive or negative feelings toward a particular behavior (Ajzen, 1991; Fishbein & Ajzen, 1975). In the present study, attitudes toward condom use are defined as the positive or negative assessment of the use of condoms, which influences college students' condom-use behavior.
5. **Subjective norms toward condom use.** Subjective norms refer to the perceived social pressure to comply with certain behaviors that are accepted as the standard in a particular society (Ajzen, 1991). This concept differs from sexual double standards. Sexual double standards are related to problems in the aspects of gender-based inequality and disparities that exist in society. However, subjective norms emphasize the cultural and social aspects that they face when engaging in a specific behavior. In the present study, subjective norms are defined as the norms of significant referents (e.g., parents, peers, and partners) toward condom use.
6. **PBC toward condom use.** PBC is the perceived ease or difficulty of performing a specific behavior (Ajzen, 1991). In the present study, PBC is defined as having the confidence to use condoms when barriers to using them exist (i.e., self-efficacy).
7. **Self-efficacy toward condom use.** Self-efficacy refers to the degree of confidence in the ability to perform a particular behavior, even if there are many obstacles to performing the behavior (Strecher et al., 1986). In the

present study, self-efficacy is defined as the belief in one's ability to perform a specific behavior successfully.

8. **Barriers toward condom use.** Barriers refer to individuals' degree of discomfort or embarrassment related to using condoms (T. D. Fisher, Davis, Yarber, & Davis, 2011). In the present study, barriers toward condom use are defined as the level of difficulty an individual experiences in purchasing or carrying a condom.
9. **Condom-use behaviors.** Condom-use behaviors refer to individuals' past relationship experiences related to condom-use that influence ongoing or future sexual decisions (Alexander et al., 2014). In the present study, condom-use behavior is defined as their actual condom use in the past 6 months. In the present study, we focus on male condom use since male condom is the most used contraceptive method among South Korean emerging adults (Hwang & Chung, 2014; E. A. Kim, Lee, & Lee, 2017; J. H. Kim, Park, & Cho, 2018; J. Y. Lee, 2017).
10. **Risky sexual behavior.** Risky sexual behavior is defined as having sexual intercourse without using condoms or other contraceptive methods, which can increase the risk of STD/HIV infection (AVERT, 2019a; CDC, 2019b). Here, in the present study, risky sexual behaviors specifically refer to not using condoms during sexual intercourse, which increases the possibility of negative consequences for sexual health, such as STD/HIV transmission.

CHAPTER II

REVIEW OF THE LITERATURE

Existing Problem

Exposure to a more open sexual culture increases the frequency of sexual experience among college students, which can paradoxically lead to and reduce reproductive health issues (I. S. Lee & Cho, 2012). The rapid development of mass media and a variety of informational resources (e.g., the availability of online sexual health information and the prevalence of Internet pornography) also contribute to changing conceptions and consciousness of sex and may negatively affect or confuse younger individuals (J. H. Choi et al., 2010). Furthermore, the sexual value system, which can help individuals appropriately accommodate and judge sexual impulses upon maturity, is not yet fully developed in young adulthood, leaving these individuals ill-prepared to assess their own and others' sexual behaviors. Impulsive sexual behavior and unprotected sexual experiences can increase the risks of social and personal issues such as unwanted or unplanned pregnancies, single parenthood, abortions, and STDs, and college students' perception of these risks can impact them psychologically and emotionally (E. M. Lee & Kim, 2017).

Worldwide, many studies have shown that unintended pregnancy among unmarried sexually active female adolescents and young adults, aged 15 to 24 years, often results in unsafe abortions in countries where the procedure is illegal, such as South

Korea (Singh, Remez, Sedgh, Kwok, & Onda, 2018; WHO, 2018a). Abortions that are carried out in unsafe conditions endanger young women's lives, thereby creating another major health problem. In South Korea, the abortion rate is very high among unmarried young females (M. H. Jun, Shin, Choi, Lee, & Hong, 2014; G. M. Lee, Koh, & Kim, 2013). In a study of 6,000 South Korean college students, among the 266 who had experienced a pregnancy, 94.4% ($n=251$) having an abortion, and 17.5% ($n=44$) experienced complications during an abortion (Shin, Park, Bae, & Cha, 2010). A survey showed similar findings: among women who had experienced an abortion, the average age at the time of the abortion was 29.4 years, more than half of the respondents who had undergone an abortion were in their 20s (57.8%), and most were unmarried (46.9%; South Korea Institute for Health and Social Affairs, 2018).

Although it is important to use contraceptive methods to prevent unintended pregnancies and other sexual health problems, the rate of contraceptive use among South Korean college students is low (Y. R. Lee, Kim, & Choi, 2013). According to a report by the Korean Women's Development Institute in 2018, only 59.2% of young Koreans between the ages of 15 and 24 years reported always using contraceptives during sexual intercourse. Among various contraceptive methods, the male condom is most commonly used by young people in South Korea (Hwang & Chung, 2014; E. A. Kim et al., 2017; J. H. Kim, Park, & Cho, 2018; J. Y. Lee, 2017); it is considered to be an effective contraceptive (Song & Chae, 2010) and mode of preventing STDs, including HIV. According to one survey conducted with 133 South Koreans between 15 and 44 years, condoms were the most frequently used contraceptive method during sexual intercourse

in individuals between 20–29 years (62.5%) and among unmarried people (65.5%; South Korean Ministry of Health and Welfare, 2011). Importantly, unwanted pregnancy and STDs/HIV can both be prevented by using condoms (WHO, 2018b). Although female condoms (femidoms) exist, they are not a common contraceptive method in South Korea, where women are very reluctant to put condoms inside their vaginas, even though the probability of contraceptive failure is no more than that of male condoms (S. H. Kim, 2017). However, the perceived failure rate is not the reason that women are reluctant to use them. On the contrary, female condoms are considered to be disadvantageous because they are more difficult to buy and to use, compared to male condoms (Gong, 2017). Therefore, in the present study, we focus on male condom use.

Most STDs, including HIV, are transmitted during sexual contact (South Korea Disease Control Headquarters, 2017), which presents a pressing need to manage the promotion of sexual health among college students systematically. However, concerning Korean culture, few studies have, to date, investigated the relationship between college students' condom-use behaviors and the decision-making process around condom use in South Korea. Furthermore, few studies have utilized appropriate theoretical frameworks to determine the predictive relationship between young South Koreans' condom-use behaviors and other factors that may promote or reduce condom use. Thus, through the present study, we aim to generate new knowledge and a better understanding of South Korean college students' condom-use behaviors.

As explained above, we seek to understand the sociocultural influences on condom-use behaviors among South Korean college students, as well as their decision-

making process regarding condom use, based on two theoretical frameworks—TGP and TPB. Understanding invisible and intangible cultural influences on young people's condom-use behaviors should shed some light on the normative behavior that informs this behavior. In turn, this should contribute to the reduction of STD/HIV transmission through the development of culturally-targeted education that is aimed at changing college students' sexual health beliefs and condom-use practices. Thus, we review the literature related to the four separate research goals. First, we explore the predictors influencing South Korean college students' readiness to perform a given behavior (i.e., condom use) from intrapersonal and interpersonal perspectives. Second, we assess the unique culture behind South Korean students' behavior. Third, we review existing policies and subsidies related to condom use. Finally, we identify and apply a theoretical framework to interpret the phenomena revealed in the findings.

Condom-use Behaviors Predictors

There is a variety of relevant factors at the intrapersonal, interpersonal, sociocultural, environmental, and political levels that influence South Korean female college students' condom-use behaviors. Examining these characteristics allows for an expanded understanding of the behavior of these young women.

Intrapersonal factors. The demographic characteristics that have been selected for the current study represent the most frequently used variables in previous research related to individuals' sexual beliefs, values, attitudes, and behaviors in the South Korean population. These include age, college year, major, religion, current type of residence, family's perception toward sexual behavior, experience of sex education since becoming

a college student, age of first sexual intercourse, condom-use experience, engagement in sexual intercourse, number of sexual partners, types of sexual partners, previous STD diagnosis, experience of unwanted pregnancy, and experience of forced sexual intercourse with a partner.

Sexual assertiveness. Sexual assertiveness is defined as the power to claim, refuse, and to prevent sexual relations or intentions from others (E. S. Lee & Kang, 2010). Several previous studies examined the general characteristics in relation to sexual assertiveness in South Korean emerging adults and found that the sexual assertiveness was associated with gender, major, and sexual intercourse experience (H. J. Kim, 2018; K. W. Kim, Kang, & Jeong, 2012; B. M. Kim & Park, 2015; E. S. Lee & Kang, 2014). Female students have shown higher sexual assertiveness scores than male students (K. W. Kim et al., 2012; Y. H. Kim et al., 2013; E. S. Lee & Kang, 2014); this is a surprising finding, given that in terms of sexual behavior, Korean women are expected to behave more passively. Nevertheless, students majoring in the human sciences, other human and social fields, and the health and medical fields exhibited higher scores as well (K. W. Kim et al., 2012; Y. H. Kim et al., 2013), while students with sexual intercourse experience exhibited lower sexual assertiveness scores than students who were not sexually experienced (K. W. Kim et al., 2012; Y. H. Kim et al., 2013).

Interestingly, H. J. Kim's (2018) study showed a difference related to the number of previous intimate relationships. That is, female students who had experienced fewer than four intimate relationships in the past exhibited higher sexual assertiveness scores than students who had experienced more than five intimate relationships (H. J. Kim,

2018). Other researchers have shown that female students may be afraid of their partners' reactions, or of ruining their relationships if they display more sexual assertiveness (e.g., a willingness to say "no" or to insist on contraception; S. H. Choi, 2016; H. W. Kim, 2015), implying that past sexual experience is a crucial factor in women's sexual behavior (Alexander et al., 2014). Furthermore, students are less likely to express their thoughts about sex when they are dating or if they have had more experience in dating, so individuals' sexual intercourse experience should also be considered when researching sexual assertiveness (Hwang & Chung, 2012). Given that research comparing sexual assertiveness by gender and general characteristics is limited, further study is needed to explore differences in sexual assertiveness in a South Korean context.

For example, in a sample of South Korean college students (K. W. Kim et al., 2012), sexual assertiveness was significantly correlated with participants' gender ($t=-5.84, p<.001$), college year ($t=2.12, p=.034$), college major ($t=3.59, p=.014$), level of acceptance of sexual behavior ($t=6.97, p=.001$), and sexual intercourse experience ($t=3.16, p=.002$). Y. H. Kim et al. (2013) also found significant gender differences in sexual assertiveness ($t=-6.38, p<.001$), with women exhibiting higher sexual assertiveness scores ($M=55.41, SD=6.92$) than male college students ($M=51.7, SD=67.20$). Furthermore, sexual assertiveness scores significantly differed by major ($F=30.78, p<.001$), religion ($t=6.29, p<.001$), and intercourse experience ($t=2.01, p<.05$; Y. H. Kim et al., 2013). Similarly, E. S. Lee and Kang (2014) reported that sexual assertiveness scores between females and males were significantly different ($t=-9.39, p<.001$; $M=4.1, SD=0.51$ versus $M=3.5, SD=0.66$, respectively).

Moreover, in a study conducted by H. J. Kim (2018), unmarried female college students' sexual assertiveness was significantly different from that of their male counterparts, based on general characteristics, including age ($t=2.59, p=.010$), having a boyfriend ($t=-3.33, p=.001$), number of intimate relationships ($t=3.04, p=.003$), and sexual intercourse experiences ($t=-3.31, p=.001$). B. M. Kim and Park's (2015) study examined gender differences regarding sexual assertiveness, and in most categories, female students exhibited higher sexual assertiveness scores compared to male students. Male students showed significantly different sexual assertiveness by college year ($F=3.57, p=.015$), religion ($t=4.43, p<.001$), major ($F=4.28, p=.006$), financial sources ($F=5.60, p=.04$), marital status of parents ($F=4.25, p=.015$), dating experience ($F=5.41, p<.001$), type of physical contact during dating ($F=9.69, p<.001$), and military status ($F=-1.36, p=.006$); however, female students only showed significant differences by major ($F=5.19, p=.002$) and type of physical contact during dating, including—light physical contact, hugs, kisses, caresses, or sexual intercourse ($F=10.28, p<.001$) (B. M. Kim & Park, 2015).

Sexual double standards. Sexual double standards refer to differences in criteria for male and female sexual acceptability and freedom of action in sexual situations (Y. S. Choi, Lee, & Lee, 2017; J. H. Kim et al., 2018; Y. J. Kim et al., 2019; Oh, Kang, & Kim, 2010). Previous studies found that the sexual double standard was associated with gender, age, and major (Y. H. Kim et al., 2013; E. S. Lee & Kang, 2014). Male students exhibited higher scores for gender-role stereotypes, indicating more rigid beliefs than their female counterparts (Y. S. Choi et al., 2017; E. S. Lee & Kang, 2014; Oh et al., 2010; Shim et al.,

2012); however, students older than 23 years had less strict gender-role stereotypes compared to students younger than 23 years (Y. S. Choi et al., 2017; Shim et al., 2012). Still, neither gender nor age has yielded a consistent outcome. For instance, in M. Y. Kim and Song's (2012) study, female students exhibited higher scores than males, while students under 20 years scored higher than those older than 20 years. Students' major also influenced their level of adherence to gender-role stereotypes; students majoring in non-health-related disciplines and nursing exhibited higher scores than those majoring in health-related and non-nursing disciplines (Y. S. Choi et al., 2017; M. Y. Kim & Song, 2012). In sum, the question of gender-role stereotypes by general characteristics remains open.

For example, Y. H. Kim et al.'s (2013) study found significant low-to-moderate negative correlations between gender-role stereotypes and sexual assertiveness ($r=-.37$, $p<.001$) and between traditional sexual attitudes and sexual assertiveness ($r=-.27$, $p<.001$). Further, Shim et al. (2012) reported significant differences by gender ($t=7.14$, $p=.001$) and age ($t=7.57$, $p=.001$) in gender-role stereotypes among college students in South Korea. In E. S. Lee and Kang's (2014) study, male students' gender-role stereotypes scores were significantly higher ($M=2.8$, $SD=0.63$) than those of female students ($M=2.2$, $SD=0.61$, $t=10.26$, $p<.001$). Oh et al. (2010) found similar results: male students exhibited significantly higher stereotype scores ($t=3.87$, $p<.001$) than female students (75.58 and 70.16, respectively). Furthermore, gender-role stereotypes were significantly higher if participants were religious ($t=2.57$, $p=.038$) (Oh et al., 2010). Y. S. Choi et al. (2017) found significant differences in gender-role stereotypes based on

gender ($t=3.45, p=.001$), age ($t=-2.84, p=.005$), and major ($t=-3.01, p=.003$), as did M. Y. Kim and Song (2012), by gender ($t=-4.74, p<.001$), age ($F=3.87, p=.022$), and major ($t=2.67, p=.008$). Meanwhile, female students ($M=2.93, SD=0.35$) scored higher than male students ($M=2.73, SD=0.42$) on consciousness of equality regarding gender roles (a reversed construct).

Sexual attitude. Sexual attitude is considered a crucial factor for explaining the sexual behavior of college students, as it determines their degree of acceptance of particular sexual practices (Jang & Lee, 2011). Attitude affects behavior (N. H. Kim et al., 2015), meaning that an open sexual attitude can result in open sexual behavior (S. B. Park, Cho, & Lee, 2007). Previous research has demonstrated that when students were more sexually open—with more accepting and permissive sexual attitudes and consciousness—they engaged in more sexual intercourse (Jang & Lee, 2011; E. M. Kim et al., 2013). In general, youth cannot properly control or judge sexual impulses and behaviors, given that their sexual values are not fully developed or mature (S. J. Kim, Moon, & Kang, 2011). Moreover, various confusing and stressful situations can interfere with sexual behaviors in emerging adults, including their decision-making ability regarding their sexual health (Khurana & Cooksey, 2012; E. M. Lee & Kim, 2017). Thus, young adults must be able to judge, select, and take responsibility for their sexual behaviors, which should help them foster a positive sexual attitude (E. M. Lee & Kim, 2017).

Several previous studies examined the general characteristics related to sexual attitudes in South Korean emerging adults and found that the sexual attitudes were

associated with academic year, major, religion, and type of residence (J. Choi & Kim, 2011; Im, Yun, Sin, & Lee, 2016; M. O. Kim, 2013; S. H. Kim & Yoon, 2012). Research indicated that senior students exhibit more positive sexual attitudes compared to other years (Im et al., 2016; E. M. Kim et al., 2013; S. H. Kim & Yoon, 2012). J. Choi and Kim's (2011) study, which only measured the sexual attitudes of freshmen and sophomores, had a similar finding: second-year students had a higher sexual attitude score (showing more positive attitudes) than first-year students. Students majoring in natural sciences, nursing, and emergency medical services exhibited more positive sexual attitudes than students majoring in liberal arts, fine arts and sports, physical therapy, and biomedical laboratory science (Im et al., 2016; S. H. Kim & Yoon, 2012). Additionally, religious students exhibited lower sexual attitude scores than students who were not religious (Im et al., 2016; E. M. Kim et al., 2013).

Furthermore, S. H. Kim and Yoon's (2012) study showed that non-Protestant students had more positive sexual attitude scores than Protestant students. Although findings were inconsistent regarding type of residence, E. M. Kim et al.'s (2013) study found that students who were living alone, apart from family, had higher sexual attitude scores than students who were living with their families or in a lodging house or dormitory. In contrast, J. Choi and Kim's (2011) study found that students living in lodging houses exhibited higher scores than students living with their families, in dormitories, or in other types of residences. In addition to academic year, major, religion, and type of residence, other factors have been found that affect the sexual attitudes of

college students; however, further research should be specifically conducted to obtain data that better characterize South Korean college students' sexual attitudes.

For instance, a sample of male college students in South Korea produced similar results (S. H. Kim & Yoon, 2012), as students' sexual attitudes were significantly different by age ($p=.04$), major ($p<.001$), college year ($p<.001$), religion ($p<.001$), seeking information regarding sex in the mass media ($p<.001$), smoking habits ($p<.001$), drinking habits ($p<.001$), number of dating partners in the past ($p=.001$), and sexual intercourse experience ($p<.001$) (S. H. Kim & Yoon, 2012). J. Choi and Kim (2011) reported that college students' sexual attitudes were significantly different based on college year ($t=3.28$, $p=.001$) and type of residence (living with parents, dormitory, lodging house, or others; $F=4.26$, $p=.006$). Moreover, in a study by Im et al. (2016) conducted on college students who studied in the health care field, there were significant differences in sexual attitudes depending on age ($F=3.27$, $p=.04$), college year ($F=4.87$, $p=.003$), major ($F=32.31$, $p<.001$), religion ($F=12.47$, $p<.001$), family's socioeconomic status ($t=-2.02$, $p=.045$), self-perceived intimacy with one's mother ($F=12.02$, $p<.001$), and sexual orientation ($t=2.83$, $p=.005$). Another study (M. O. Kim, 2013) was conducted on nursing students in South Korea and found significant differences regarding sexual attitudes based on gender ($t=2.05$, $p=.042$), number of siblings ($t=2.73$, $p=.015$), dating experience ($t=2.90$, $p=.004$), and the timing of their last experience of sex education (elementary school, middle school, high school, or university; $t=17.40$, $p<.001$).

Additionally, there was also a relationship between sexual attitudes and sexual intercourse experience (E. M. Kim et al., 2013). One study found a significant difference

in sexual attitudes among college students who had engaged in sexual intercourse and those who had not ($t=6.69, p<.001$). There was also a low-to-moderate negative correlation between sexual attitude and sexual intercourse experience variables ($r=-.26, p<.001$) (E. M. Kim et al., 2013).

Sexual behavior. Previous studies found that sexual behavior was associated with gender, college year, and type of residence in South Korean emerging adults (J. Choi & Kim, 2011; S. J. Kim et al., 2011). Male students showed more active sexual behavior than female students (J. Choi & Kim, 2011; S. J. Kim et al., 2011). In terms of college year, similar results were obtained in S. J. Kim et al.'s (2011) and J. Choi and Kim's (2011) studies: freshman students showed more passive sexual behavior than more advanced students. These studies also obtained similar results for type of residence: students who lived with their families or in a boarding house or dormitory exhibited lower sexual attitude scores compared to students living alone apart from family or in other types of accommodations (J. Choi & Kim, 2011; S. J. Kim et al., 2011). Due to the vast scope of sexual behavior research, it seems necessary to limit ourselves to studies that employ operational definitions similar to those used in the current study.

For example, differences in sexual behaviors according to demographic variables were also found among South Korean college students for gender ($t=5.43, p<.001$), major ($t=3.98, p=.002$), college year ($t=4.36, p=.005$), socioeconomic level ($t=3.98, p=.019$), and type of residence ($t=2.96, p=.05$) (S. J. Kim et al., 2011). Similarly, in J. Choi and Kim's (2011) study, sexual behavior was significantly different based on students' gender

($t=6.27, p<.001$), college year ($t=2.92, p=.004$), religion ($t=3.79, p=.011$), and type of residence ($t=3.71, p=.013$).

Another study showed that factors which predict college students' sexual behavior (i.e., sexual experience) include sexual double standards ($\beta=0.17, p=.023$), sexual attitude ($\beta=-0.14, p=.033$), and academic achievement ($\beta=0.16, p=.006$) (M. S. Kim, 2010), suggesting that those with greater sexual experience may more strictly adhere to traditional male-dominated, archetypal gender roles and more negative sexual attitudes.

Condom use. A previous study examined the general characteristics related to condom-use behavior in South Korean emerging adults and found that condom use was associated with gender, intention to use condoms, and condom use experience (H. W. Kim, 2015). For example, H. W. Kim (2015) found that among male students in South Korea, their condom use significantly differed by age ($t=6.22, p=.01$), sexual experience ($t=23.42, p<.001$), history of STDs ($t=3.17, p=.09$), condom-use experience ($t=28.86, p<.001$), unwanted pregnancy experience ($t=3.37, p=.09$), abortion experience ($t=8.45, p<.01$), and condom breakage experience ($t=12.73, p<.001$). In contrast, female students' intention to use condoms significantly differed by sexual experience ($t=12.91, p<.001$), ECP use ($t=6.40, p=.01$), condom-use experience ($t=21.24, p<.001$), rhythm method use ($t=6.39, p=.01$), unwanted pregnancy experience ($t=5.88, p=.02$), abortion experience ($t=9.04, p<.01$), and condom-breakage experience ($t=6.11, p=.02$; H. W. Kim, 2015).

Additionally, a previous study has evaluated participants' sexual attitudes, beliefs, skills, and experiences of condom use (E. M. Jun & Shin, 2016). For instance, E. M. Jun and Shin (2016) found a moderate-to-strong negative correlation between condom use

and gender-role stereotypes ($r=-.52, p<.01$), and a low-to-moderate negative correlation between condom use and sexual attitudes ($r=-.24, p<.01$) among male college students in South Korea. These results suggest that persons who exhibit conservative gender-role stereotypes and negative sexual attitudes display low intent to use condoms during sexual intercourse. It is worth noting here again that most studies examined the intention to use condoms instead of condom use behaviors directly. The present study used condom-use behavior as the outcome because it reflects actual behaviors and is more useful than the intention to use condoms.

With limited research exploring differences regarding the use of condoms by general characteristics and sex-related information, thus, the present study included age, college year, major, religion, current type of residence, family's perception toward sexual behavior, experience of sex education since becoming a college student, age of first sexual intercourse, condom-use experience, engagement in sexual intercourse, number of sexual partners, types of sexual partners, previous STD diagnosis, experience of unwanted pregnancy, and experience of forced sexual intercourse with a partner. These variables were used as controlled factors.

Sexual knowledge. Aside from the factors mentioned above, correct and useful sexual health knowledge is also an essential factor for minimizing problems related to sexual health and forming a healthy attitude towards sex (N. H. Kim et al., 2015). Indeed, knowledge about sex helps young people avoid the negative sexual health consequences that are caused by ignorance or misunderstandings that impact their sexual behavior. For example, receiving information on correct condom use, condom-use negotiation

techniques, and the protective nature and effectiveness of condoms might help youth improve their self-confidence for using condoms and may encourage consistent condom use (Farrington et al., 2016; Gloppen, David-Ferdon, & Bates, 2010). Although previous studies have shown that self-explanatory information is needed, this may not be sufficient to enact changes in behavior (J. D. Fisher & Fisher, 1992; W. Fisher, Fisher, & Harman, 2003). That is, even suitable knowledge of STD/HIV infection and the importance of using condoms might not propel people into personalizing the information or translating it into authentic behavioral change. For instance, well-informed individuals are not necessarily motivated to participate in health-promoting behaviors, whereas those who are highly motivated are not necessarily aware of good health promotion practices (W. Fisher et al., 2003). Indeed, previous studies have shown that information is a weak and inconsistent predictor of preventive behavioral change (Sharma, 2012). Therefore, in the current study, knowledge has not been included as an independent variable.

Interpersonal factors. The influence (i.e., support or pressure) of family, peers, and partners is highly associated with the establishment and routinization of individuals' sexual behaviors, attitudes, beliefs, and values. These social factors may become barriers or paths to obtaining sexual information and engaging in safer sex. In other words, depending on whether individuals receive support or pressure from the influences previously described, youths may engage in safer or riskier sexual behaviors (Boislard, van de Bongardt, & Blais, 2016; Pedlow & Carey, 2004), which can affect their sexual health. These factors might also affect young adults' choice of sexual activities (Peçi, 2017). In light of this, exploring the impact of such factors is essential to furthering our

understanding of individuals' sexual beliefs and sexual values, and eventually, their sexual behavior.

Parents. Parents play a unique and powerful role in shaping the sexual attitudes and behaviors of youths and can assist them in becoming sexually healthy adults (Somersa & Anagurthi, 2013). However, barriers to openly discussing reproductive health problems often occur owing to parents' frequent lack of age-appropriate and respectful vocabulary and skills, as well as cultural norms and taboos in the Korean context related to discussing sexual and reproductive health issues (Motsomi, Makanjee, Basera, & Nyasulu, 2016). For instance, South Korean parents reported that they felt uncomfortable and embarrassed when providing sex education to their children (E. M. Lee & Kweon, 2013), and believed that talking about sex-related topics increased their children's risk of developing STDs/HIV (Baku, Agbemaflle, Kotoh, & Adanu, 2018; Leiber et al., 2009). One study found that only five out of every 99 youths in South Korea had received sex education from their parents (S. H. Choi, 2003), indicating that South Korean parents experience difficulties in educating their children about sensitive sexual problems and sexual health.

Communication between parents and youth concerning sexual and reproductive health issues has been found to increase awareness of these issues and helps protect young people from related problems (Motsomi et al., 2016). Findings from other countries have revealed that close ties and communication between parents and youth are positively associated with more responsible and less risky sexual behaviors (Pedlow & Carey, 2004; Somersa & Anagurthi, 2013). Similarly, if South Korean college students

and parents are open to discussing sexual behaviors, youth will be more likely to use condoms and less likely to engage in risky sexual behavior or experience unwanted pregnancies (Cha, Kim, & Doswell, 2007). However, many parents in South Korea do not actively discuss sexuality with their children, even though not doing so might prompt negative sexual and reproductive health outcomes. Parents should make every effort to routinely provide sex education to their children at home to create a healthy atmosphere for developing positive sexual behaviors. If this conversation between parents and children takes place naturally, it will help these children form appropriate sexual values and cope with sexual problems (E. M. Lee & Kweon, 2013; Khurana & Cooksey, 2012).

Peers. People learn to adopt and accept given sexual attitudes, values, and behaviors through peer and social interactions (Pedlow & Carey, 2004; Tomé, de Matos, Simões, Camacho, & AlvesDiniz, 2012). In many studies, peers are viewed as a priority source of information regarding sexuality for young people (Hong & Hwang, 2013; M. O. Kim, 2013; Yang, 2012) and are important emotional supporters and social referents for making decisions concerning one's behavior, including sexual behavior (van de Bongardt et al., 2017). Previous studies conducted in various countries have shown that the process of peer socialization generally involves youth attunement to—and acceptance of—social norms, peer reinforcement, and valued behaviors (Choukas-Bradley, Giletta, Cohen, & Prinstein, 2015; Potard, Courtois, & Rusch, 2008). Given that sexual behavior and youth attitudes are often similar to those of their friends (van de Bongardt et al., 2017), having peers involved in risky behaviors could influence a young person's own inclination to do the same (Pedlow & Carey, 2004).

In other words, even if individuals have considerable awareness of the risky or unhealthy nature of certain behaviors, they still might engage in those behaviors because of peer norms and pressure (Peçi, 2017). Indeed, peers' perceptions of sexual behavior is an essential and normative predictor of an individual's sexual intentions (Peçi, 2017; Potard et al., 2008), perhaps because youth often believe in doing what their friends think they should do (Bingenheimer, Asante, & Ahiadeke, 2015). However, on a positive note, compared to other age groups, when receiving sound health information from peers who are facing similar concerns and pressure, young people are also more likely to modify their behaviors and attitudes beneficially (Abdi & Simbar, 2013; Widman et al., 2016). Nevertheless, peer influence tends to be a factor for youth who engage in risky sexual behaviors, but less so for those in other age groups (Bingenheimer et al., 2015; McCoy, Dimler, Samuels, & Natsuaki, 2019; Widman et al., 2016). For example, to gain the respect and acceptance of their peers, young people who believed that most of their peers had engaged in sex were more likely to engage in sexual activities and have sexual relationships at an earlier age (Bauermeister, Elkington, Brackis-Cott, Dolezal, & Mellins, 2009). Thus, to make positive changes, peer education may be an effective strategy to provide information, training, or resources for youth engaged in risky sexual behaviors (Menna, Ali, & Worku, 2015).

Sexual partners. Given that an individual's sexual behavior can be influenced by that of their partners, sexual partners should also be considered. Research indicates that sex partners is a significant factor influencing the intention of condom use, especially among college students (Fehr, Vidourek, King, & Nabors, 2018; Mehra, Ostergren,

Ekman, & Agardh, 2014). Indeed, the partner's attitudes, the nature of the relationship, number of sexual partners, negotiation skills, norms around the partner's practices, and quality of communication with the partner all play a role in influencing an individuals' decision-making regarding sexual behavior.

Regarding the nature of the relationship (e.g., casual dating, committed relationship, or "hooking up") and the number of sexual partners (Fehr et al., 2018), previous studies have revealed that within committed relationships, condom use tends to be less frequent than in casual or multiple-partner relationships (Caldwell & Mathews, 2015; Cornelius & Kershaw, 2017; Senn, Scott-Sheldon, & Carey, 2014). One study showed that the prevalence of condom use at last intercourse was high between students who had casual partners ($p=.004$) and those who had had two or more partners in the last month ($p=.009$) (Moreira, Dumith, & Paludo, 2018). Similar findings also appeared in Staras, Livingston, Maldonado-Molina, and Komro's study (2013), which showed that youth were more likely to use condoms with partners who were considered casual or unexpected. Furthermore, in a study by Eleftheriou, Bullock, Graham, Stone, and Ingham (2016), participants who reported a higher number of sexual partners exhibited a higher intention to use condoms ($p<.05$). Thus, based on previous findings, condom use in young people can be influenced by their number of sex partners and the nature of their relationships with these partners.

Negotiation skills, partner (social) norms, and quality of communication with sexual partners also influence an individual's intention to use condoms, including the person's attitudes toward, perceptions of, and self-efficacy for condom use. Although

little to no research has been conducted to examine this association in South Korea, research has been performed in the United States. For example, Harvey and Henderson (2006) reported that from a sample of young male Latinos in Los Angeles, those who had more positive attitudes toward condoms, stronger partner norms on condom use, and more participation in decision-making regarding condom use exhibited higher intent to use condoms and higher actual condom use (overall p -value was under 0.05).

Additionally, in another study conducted in the United States on 179 women aged 18 to 30, condom-use intention was associated with participants' perceptions of their male partner's attitude (Bryan et al., 2017). This finding, in turn, suggests that people's perceptions of their partners' attitudes toward condom use are related to their own intent to use condoms and their own sexual behavior (Sanderson & Yopyk, 2007). Moreover, given that condom use during sexual intercourse requires at least some awareness and willingness on the part of both partners (Sanderson & Yopyk, 2007), we can conclude that, to some extent, condom use crucially depends on the level of agreement and effective communication between partners (Matera, 2014).

Although having strong self-efficacy can be considered an important determinant of condom-use decision-making and practice (Hwang & Chung, 2014; K. H. Kim & Cho, 2016), previous studies suggest that young adults only have low-to-moderate self-efficacy toward condom use (Do & Seo, 2013; Hwang & Chung, 2011). Their reasons for not using condoms are related to fears over their partner's reaction, suspected violations of trust, relationship loss, and partner violence (Farrington et al., 2016). According to one study conducted with South Korean college students, the higher the self-efficiency

toward contraceptive use—in both men and women—more they continued to use contraceptives ($r=.53, p<.01$; $r=.49, p<.01$, respectively; Hwang & Chung, 2011). Given this research, efforts should be made to enhance self-efficacy toward condom use among young people. Ultimately, doing so will not only help these individuals protect themselves, but will also direct their sexual behavior with a sense of responsibility in situations of conflict surrounding contraception and prophylaxis.

Influence of Sociocultural and Environmental Factors

One's perception of gender inequality is formed and controlled by the attitudes and value structures of society (Y. R. Lee et al., 2013). In South Korea, the Confucian values of the traditional male-dominated ideology and patriarchal system continue to affect society. These values are typically conservative and may serve to obscure information concerning safe and healthy sexual relationships and practices. For example, sexual standards are generally permissive for men and stricter for women (J. H. Kim et al., 2018), as already noted; however, as the values and cultural sensibilities of young people differ from those of older generations, particularly in terms of young people's open attitudes and behaviors regarding sex, this trend is changing. Currently, the expression of interest in sex is no longer a source of secrecy and shame in South Korean youth. Indeed, describing or discussing sexual desires or experiences is commonplace in movies and in other mass media and public life, as it is no longer seen as disgraceful or embarrassing. Topics that have previously been regarded as sensitive or even forbidden, including gender- and sex-related issues such as lesbian, gay, bisexual, transgender, and queer (LGBTQ) identity, single parenthood, pregnancy before marriage, sexual violence,

and the “Me Too” movement, are emerging as social issues that can be openly discussed. While changes in cultural openness and values related to sexuality have created positive outcomes, some problems have also emerged (Y. H. Kim et al., 2013; E. S. Lee & Kang, 2014). Social and cultural perceptions of sexuality, which, as noted, are changing with the times, seem to have a powerful influence on the sexual behavior of college students (S. J. Kim et al., 2011). For instance, as online media platforms have gained popularity, they have accelerated changes in the sexual culture and behavior of young people. College students may experience sex in nebulous and unstable situations without first having a firm behavioral standard or sexual consciousness (J. Choi & Kim, 2011; B. M. Kim & Park, 2015). The sexual consciousness and values of young people have also changed drastically with the influx of a culture of sexual openness and sexual information (E. S. Lee & Kang, 2014). College students are especially exposed to the permissive atmosphere of the new sexual culture, which might lead them to experience various health problems resulting from careless and irresponsible sexual behaviors (Yoo, Park, & You, 2012). Furthermore, exposure to indiscriminate sexual information, accepting distorted sexual information without a critical lens, and having contact with the sexual culture of their milieu can all affect the sexual attitudes and sexual behavior of college students (S. J. Kim et al., 2011). According to a study by K. H. Kim and Cho (2016), while Korean college students tend to have an open and positive attitude toward sexual behavior and their rate of sexual experiences is increasing, sexual knowledge and contraceptive use are low, which may be causing sex-related problems.

Amid these rapid changes in the sexual attitudes and behaviors of college students in South Korea, some individuals still experience difficulty expressing their opinions or preferences related to contraceptive use during sexual intercourse. In previous studies, contraceptive self-efficacy was an important predictor of contraceptive attitude and behavior during sexual intercourse (Hwang & Chung, 2014; J. H. Kim et al., 2018). Contraceptive self-efficacy is demonstrated when a person asserts to a sex partner the need to use contraception during sexual intercourse (J. H. Kim et al., 2018); hence, a person with high contraceptive self-efficacy can actively cope with sexual health problems that may occur in a sexual relationship, which is one element of sexual assertiveness (Do & Seo, 2013; S. H. Kim & Yoon, 2012).

In one study (K. W. Kim et al., 2012), people with high sexual self-efficacy generally exhibited high sexual assertiveness, which permitted them to cope and to realize what they wanted on their own ($r=.28, p<.001$). In another study (Jung, 2016), contraceptive self-efficacy among college students in South Korea had a mean of 37.07 ($SD=10.11$) on a scale of 55. Results indicated significant gender differences ($t=7.79, p=.008$) and differences by sex education experience during college ($t=0.013, p<.001$). A third study by J. H. Kim et al. (2018) showed similar results: average contraceptive self-efficacy had a mean of 44.20 ($SD=5.91$) on a scale of 60 and statistically significant differences by gender ($t=-5.00, p<.001$), contraceptive education ($t=4.68, p<.001$), experience using contraceptives ($t=2.47, p=.014$), intent to use contraceptives ($t=2.75, p=.006$), personal characteristics ($F=8.14, p<.001$), and number of friends ($F=26.56, p<.001$).

Based on these findings, general demographic characteristics, such as gender and experience of sex education, seem to influence self-efficacy for contraceptive use among South Korean college students. In terms of gender, findings are inconsistent: in Jung's (2016) study, male students ($M=37.58$, $SD=7.33$) exhibited higher self-efficacy for using contraceptives than female students ($M=36.86$, $SD=5.56$), while in contrast, in J. H. Kim et al.'s (2018) study, female students' scores ($M=3.84$, $SD=0.48$) were higher than that of male students ($M=3.54$, $SD=0.45$). However, both studies showed similar results for the experience of sex education; that is, students who had received sex education exhibited higher self-efficacy toward contraceptive use than students who had not received sex education (Jung, 2016; J. H. Kim et al., 2018).

Aside from general characteristics, gender norms have also been found to influence college students' self-efficacy for contraceptive use. For instance, J. H. Kim et al. (2018) showed a moderate negative correlation between contraceptive self-efficacy and sexual double standards ($r=-.39$, $p<.001$), which was the strongest predictor of contraceptive self-efficacy ($\beta=-.27$, $p<.001$). Thus, the higher the self-efficacy of contraceptive use, the less a person adopts sexual double standards.

However, only a few studies have explored factors influencing self-efficacy for contraceptive use based on sociocultural and environmental aspects such as gender norms, sexual assertiveness, and sexual security; thus, to take social and cultural context into account, we included the above variables in our study to understand South Korean emerging adults' condom-use behaviors.

Policies and Subsidies toward Condoms

In general, under the 2019 AIDS-related civil subsidy guidelines (South Korea Disease Control Headquarters, 2018), applications by organizations in South Korea that are interested offering free condoms via subsidies should be made to the Korea Disease Control Headquarters; however, there are limits to providing for people with HIV/AIDS, STDs, and other vulnerable people, such as those who need STD screening and the LGBTQ population. Thus, efforts are needed to expand the scope of this program to cover a larger group of sexually active people not involved in long-term monogamous relationships, regardless of their age or sexual and gender identity.

Although some national and municipal government efforts to provide condoms to youth have occurred, these efforts have been limited due to public opposition. For example, the Seoul metropolitan “2017 Human Rights Policy Plan” includes a plan to provide free condoms to young people through their schools, but because of opposition from various individuals, groups, and organizations, this plan has not yet been implemented. The Korean Health Teachers Association’s position is that in the current public education system, where there is a lack of systematic sex education, if youth receive free condoms, this is not a means of resolving their sex problems, but may cause more serious problems. For college students, too, there is no policy or subsidy available for free condom distribution. Nevertheless, in a few college health centers, condoms are distributed at no cost. These limitations on the distribution and use of condoms may limit students’ ability to participate in safe and protected sexual activities and may increase their vulnerability to sex-related problems. Active interest in—and participation of—

communities across the country is needed to develop programs, policies, and practices that protect and support sexual safety among college students. Additionally, it is necessary to establish an open culture around purchasing condoms and providing easily obtainable online purchasing alternatives for college students. Moreover, using rapidly developing mass media may be one strategy to encourage condom use and to prevent unwanted pregnancies and STDs. Further research should be conducted to explore the cultural background of low condom-use in this population because little is known about this area.

Theoretical Framework

Theory of gender and power. The present study is the first to use TGP to examine the phenomenon of interest. TGP was used to help us understand the role of power in sexual relationships and condom use, and to explore the cultural underpinnings of South Korean female emerging adults' condom-use behaviors. Although there are three constructs in the TGP (i.e., sexual division of labor, sexual division of power, and structure of cathexis), in the present study, we focused on three concepts—sexual assertiveness, sexual double standards, and sexual security—derived from the sexual division of power and structure of cathexis, disregarding sexual division of labor as it is not relevant in the present study. In previous studies, sexual assertiveness and sexual double standards have been frequently used to measure gender and power inequality in South Korea, but rarely have they been used to investigate the affective state of sexual security or to illustrate individuals' emotional responses, decisions, and negotiations.

Sexual assertiveness. Sexual assertiveness is the ability to autonomously make decisions so that one can take care of one's sexual health in a situation with sexual conflict. A high level of sexual assertiveness allows individuals to behave independently and to protect themselves from physical and psychological harm due to unwanted sexual activities without undue influence from internal or external conditions. On the other hand, a low level of sexual assertion increases the risk of harm in unwanted sexual situations (B. M. Kim & Park, 2015; Y. H. Kim et al., 2013). Sexual assertiveness is essential to protecting oneself from unwanted or unsafe sexual intercourse and serves to achieve goals (e.g., attempting or eliciting wanted sexual behaviors; Y. H. Kim et al., 2013). Given that students use contraception to prevent STDs and for self-preservation, it is important to examine students' ability to cope actively with the situations they face. Y. H. Kim and Cho (2014) observed a low-to-moderate positive correlation between sexual assertiveness and sexual behavior ($r=.36, p<.001$), indicating that individuals with low sexual assertiveness experience passive sexual behaviors in sexual relationships.

According to H. J. Kim (2018), gender-role stereotypes and sexual experience—which explain 41.7% of the variance—influence the sexual assertiveness of unmarried women in South Korea. This study highlights how the age of first marriage and the period of engaging in casual dating has recently increased, thus necessitating a deeper understanding of sexual assertiveness among unmarried women (H. J. Kim, 2018). Previous studies have shown a low-to-moderate negative correlation between sexual assertiveness and gender-role stereotypes ($r=-.58, p<.001$ in women; $r=-.21, p<.001$ for both genders; H. J. Kim, 2018; E. S. Lee & Kang, 2014). S. H. Choi (2016) demonstrates

how college students are more likely to be sexually assertive when they possess fewer gender-role stereotypes ($B=-4.91$, $SE=1.38$, $p<.01$). Women may also internalize traditional conceptions of femininity and masculinity, and due to social pressure to follow traditional gender roles in their sexual relationships, it may be more difficult for these women to protect themselves from unwanted situations (S. H. Choi, 2016). Thus, it would be beneficial to include sexual assertiveness in the present study.

A study by E. M. Kim et al. (2013) found a significant moderate correlation between gender-role stereotypes and traditional sexual attitudes ($r=.39$, $p<.001$). In some cases, people with traditional sexual attitudes expect men to lead the sexual relationship, while women are expected to follow men's sexual demands passively, thereby diminishing the sexual assertiveness of women (H. J. Kim, 2018; Y. H. Kim et al., 2013). Thus, women may restrict themselves by retaining traditional female gender-role stereotypes. Findings from previous studies suggest that greater gender-role stereotypes are related to lower sexual assertion among college students, regardless of gender. In other words, persons with traditional sexual attitudes in South Korea are less likely to be sexually assertive and more likely to feel incapable of refusing unwanted sexual contact (H. J. Kim, 2018; Y. H. Kim et al., 2013).

In a qualitative study conducted by Hwang and Chung (2012) on unmarried college students in South Korea, female participants had recounted how they had initially refused men's sexual advances, but ultimately accepted men's continuous demands for sex—defined as “consensual unwanted sex” or ostensible agreement—as they had felt constrained from expressing their opposition to having sex (J. H. Cho & Song, 2017). In

other studies examining sexual behavior among college students in South Korea, many female students reported experiencing unwanted sexual intercourse during dating (J. H. Cho & Song, 2017; Shin, Park, Bae, & Cha, 2010). To prevent sexual issues (e.g., unwanted pregnancies, STDs, trauma, and depression), knowing how to respond and communicate in defiance of unwanted sexual demands from a partner or another person is vital; therefore, it is necessary to examine the sexual assertiveness of female South Korean college students and whether they can protect themselves from unwanted or unsafe sexual experiences.

Sexual double standards. Sexual double standards refer to differences in the evaluation of sexual acceptability between men and women (J. H. Kim et al., 2018). For example, men might be expected to act aggressively and to be the leader in sexual behaviors or relationships, whereas women are expected to be passive and to abide by the needs of their partners (Kang & Park, 2016). Thus, sexual double standards support traditional norms or attitudes toward sexuality in general, and consequently, sexuality at the sociocultural level (J. H. Kim et al., 2018). Higher sexual double standards indicate a lower perception of gender equality and a higher acceptance of more traditional sexual standards.

In previous studies, gender-role stereotypes were higher in male students than female students (E. S. Lee & Kang, 2014; Shim et al., 2012), exemplifying the existence of sexual double standards and suggesting that gender equality has not yet been realized within our society. Moreover, the rate of sexual crimes against women (e.g., sexual violence, partner violence, and domestic violence) continues to increase (South Korea

Ministry of Government Legislation, 2018), which may be a result of the sexual double standards that exist in South Korea.

According to Shim et al.'s (2012) study, approximately 97% of victims of sexual violence in South Korea were female, 64.4% of whom were adults, and 55.7% were women in their 20s (Shim et al., 2012). Research indicates that individuals with low sexual assertiveness are vulnerable to the physical and psychological damage caused by unwanted sexual practices and are less able to act or make autonomous decisions around sexual intercourse (S. H. Choi, 2016). In other words, sexual double standards amplify the tendency to accept traditional gender roles and prevent women from categorically rejecting men's sexual advances, thereby increasing women's vulnerability to having forced sexual intercourse. Although gender equality is emphasized on a global scale, and continuous efforts are being made to improve the situation in society and in governments at large, the gender double standard still exists in South Korea; thus, it is necessary to examine sexual double standards and their influence on condom use in our target population.

Sexual security. The concept of sexual security is related to how individuals feel in sexual relationships and how they formulate their sexual behavior, depending on their own sexual experiences (Alexander, 2012; Alexander et al., 2014). Sexual security illustrates how individuals use their experiences from past relationships to influence ongoing or future sexual decisions (Alexander et al., 2014). Research indicates that cognitive and affective aspects influence individuals' sexual behaviors, including condom use and other contraceptives (Higgins, Hoffman, Graham, & Sanders, 2008). Previous

studies have also shown that college students are more likely to form sexual-behavioral judgments and decisions based on emotional and cognitive intimacy, as compared to other groups (Ertilmaz & Atak, 2011).

Theory of planned behavior. TPB (Ajzen, 1991) was incorporated into the theoretical framework of the current study to directly identify, understand, and predict South Korean female college students' condom-use behaviors.

Attitudes toward condom use behavior. According to findings from previous studies, among college students, attitude is the most important variable related to intention or readiness to use condoms (Ramírez-Correa & Ramírez-Santana, 2018; Williams, He, & Connors, 2018). For example, the more positive people's attitudes are about using condoms, the more likely they intend to use condoms (Hiltabiddle, 1996; Kocken, van Dorst, & Schaalma, 2006; Krugu, Mevissen, Debpuur, & Ruiter, 2016; Ramírez-Correa & Ramírez-Santana, 2018; Teye-Kwadjo, Kagee, & Swart, 2017a). According to Hiltabiddle's (1996) literature review on adolescent condom use, young men who perceived positive attitudes from their girlfriends regarding condom use—and who were confident in their ability to use condoms correctly—were more likely to use condoms. Similar findings appeared in Krugu et al.'s (2016) study on junior high school students in Ghana, where attitude toward condom use showed a weak-to-moderate correlation with intent to use condoms ($r=.34, p<.001$).

In a study examining attitudes toward—and intentions to use—condoms among immigrants from the Netherlands Antilles, a significant association was observed between the two constructs after controlling for other determinants (Kocken et al., 2006).

Although the adjusted odds ratios (AORs) were not explicitly explained, the AOR for positive versus negative attitudes toward condoms was 1.86, meaning that the odds of condom use intent were 86% higher for individuals with positive attitudes toward condoms, compared to those with negative attitudes (AOR=1.86, 95% CI[1.12–3.08], $p<.05$). Using a sample of undergraduate students in Chile, Ramírez-Correa and Ramírez-Santana (2018) found a significant difference in the strength of association between attitude and intention to use condoms among sexually active students ($\beta=0.41$, $p<.001$), and those who had a stable partner ($\beta=0.60$, $p<.001$). Finally, in Teye-Kwadjo et al.'s (2017a) study, attitudes toward condom use were significantly positively associated with intent to use condoms among heterosexual young people in southeastern Ghana ($B=0.38$, 95% CI [0.14–0.62], $p<.01$). Although these results were obtained outside Korea, they illustrate how attitudes toward condom-use behaviors are positively correlated with—and a strong predictor of—the intent or readiness to use condoms, thus indicating that emerging adults' attitudes may influence and explain their condom-use behaviors.

Subjective norms. Given that the social environment plays a crucial role in the sexual behaviors of humans, young people may be especially susceptible to normative pressures regarding safer versus riskier sexual behaviors (Bauermeister et al., 2009; Black, Schmiede, & Bull, 2013; Peçi, 2017). In particular, peers play a crucial role in determining youth's sexual behaviors, as noted above, and young people are more likely to relate to those whose values and norms are perceived as being attractive or similar (Asrese & Mekonnen, 2018; Dadi & Teklu, 2014; Doswell, Braxter, Cha, & Kim, 2011;

Negeri, 2014; Potard et al., 2008). According to Asrese and Mekonnen (2018), youth who perceived engaging in sexual activities as being in line with approved norms were more likely to engage in risky sexual behaviors ($B=1.61$, 95% CI [1.04–2.50], $p<.01$). A similar result appeared in Dadi and Teklu's (2014) study, which revealed a significant association between peer pressure and risky sexual behavior among adolescents in Ethiopia. To be specific, the odds of risky sexual behavior were 566% higher for students who experienced peer pressure to engage in such behavior, compared to those who did not (AOR=6.66, 95% CI [2.79–15.89], $p<0.05$). Similarly, Doswell et al. (2011) found that African American youth demonstrated a moderate correlation between peer norms and participants' intention to engage in early sexual behavior ($r=.45$, $p<.001$).

Likewise, youths were more likely to engage in sexual experiences when they felt peer pressure to have intercourse and had peers who were already involved in sexual relationships (Negeri, 2014). The AOR for *yes* versus *no* regarding feeling peer pressure to have sex was 1.96, indicating that the odds of sexual activity were 96% higher for students who felt peer pressure, as compared to those who did not (AOR=1.96, 95% CI [1.21–3.04], $p<.05$). Additionally, the AOR for *yes* versus *no* regarding students with friends who had already experienced sex was 1.41, illustrating that the odds of sexual activity were 41% higher for students with friends who had experienced sex in the past, compared to those whose friends had no sexual experience (AOR=1.41, 95% CI [0.24–0.91], $p<.05$). Finally, in a study by Potard et al. (2008) conducted with French high school students, peer perception of safer sex was associated with commitment to safer sex. Thus, in previous studies conducted outside Korea, peer influence has a significant

effect on youth's sexual behavior. Given that the social environment plays a crucial role in the sexual behaviors of youth, this implies that emerging adults may be susceptible to normative pressures regarding safer versus riskier sexual behaviors.

Perceived behavioral control. Several previous studies have found that PBC greatly influences individuals' intentions and actual behaviors (Brüll, Ruiter, Wiers, & Kok, 2016; Cha et al., 2008; Guo et al., 2014; Hwang & Chung, 2011; Protogerou, Flisher, Wild, & Aarø, 2012). In one study (Brüll et al., 2016), PBC significantly predicted intention to use condoms ($B=0.89$, $SE=0.94$, $p<.001$) among German young adults. In Cha et al.'s (2008) study, PBC among South Korean college students was measured using a self-efficacy scale, which included consistent use of condoms, correct condom use, and negotiating condom use with partners. Results indicated a weak-to-moderate correlation between the three components of self-efficacy and intention to use condoms (.38, .40, and .34 for male students and .26, .34, and .27 for female students, respectively; all correlations were $p<.01$).

A similar result occurred in a study conducted on Chinese college students (Guo et al., 2014). That is, the intention to use condoms significantly predicted PBC ($\beta=0.33$, $p<.001$). Additionally, Hwang and Chung (2011) found a moderate correlation between contraception behavior in both genders and intention to use condoms ($r=.42$, $p<.01$ in men; $r=.46$, $p<.01$ in women). Moreover, the findings demonstrated that, in general, self-efficacy toward contraception was the only component that significantly influenced both genders' intention to use contraceptives ($\beta=0.53$, $p<.001$ in men; $\beta=0.49$, $p<.001$ in women). Lastly, Protogerou et al.'s (2012) study found a direct relationship between PBC

and condom use among sub-Saharan African youth, unmediated by intentions ($r=.31$, $p<.05$).

Many studies have been conducted to examine the relationship between PBC and the intention or readiness to use condoms in South Korea and elsewhere. In some studies, self-efficacy variables were used to measure PBC to determine participants' confidence for condom use, illustrating how PBC may be an important factor for predicting condom-use behaviors.

Use of Theory of Planned Behavior

Like other health behavior theories, TPB has been applied extensively to predict the likelihood of condom use among adolescents (Alvarez, Villurruel, Zhou, & Gallegos, 2010; Jemmott et al., 2007; Wayuhuerd, Phancharoenworakul, Avant, Sinsuksai, & Vorapongsathorn, 2010), female sex workers (Couture, Soto, Akom, Joseph, & Zunzunegui, 2010; J. Gu et al., 2009; H. J. Jeong, Jo, Jung, & Lee, 2014), college students (Guo et al., 2014; H. K. Lee, 2010; Protogerou et al., 2012), heterosexual young people (Gredig, Nideroest, & Parpan-Blaser, 2006; Janepanish, Dancy, & Park, 2011; Teye-Kwadjo et al., 2017a; Teye-Kwadjo, Kagee, & Swart, 2017b), and HIV-positive men (de Munnik et al., 2017; Schutz et al., 2011; van Kesteren, Hospers, van Empelen, van Breukelen, & Kok, 2007).

Several risk prevention interventions have also been developed using TPB to increase young people's readiness to use condoms as a means of promoting their sexual health (Montanaro, Kershaw, & Bryan, 2018; Mousali et al., 2017). Even though the relative effectiveness of these constructs may vary across populations, they all positively

influenced condom-use behaviors (Ajzen, 2002). Findings from Asare's (2015) study showed that attitude toward behavior, subjective norms, and PBC all predicted college students' condom-use behaviors with statistical significance, accounting for 49% of the variance ($p < .05$ for all variables).

Previous studies have also used TPB with various populations, providing sufficient evidence that intention or readiness to use condoms is a plausible predictor of actual behavior across these groups (Espada, Morales, Guillén-Riquelme, Ballester, & Orgilés, 2016; Oppong et al., 2016; Teye-Kwadjo et al., 2017b). TPB has been tested to evaluate whether it is a suitable model to explain condom-use behaviors of young people (Dadi & Teklu, 2014; Kocken et al., 2006; Negeri, 2014). According to Espada et al.'s study (2016), TPB adequately explained condom-use behaviors among high school students in Spain ($\chi^2_{\text{difference}} (8, 410) = 13.56, p < .001$; RMSEA=.045, 90% CI [0.001–0.085]; CFI=0.98); a similar result was observed in another study conducted with Thai adolescents ($\chi^2_{\text{difference}} (6, 607) = 2.27, p = .894$; RMSEA<.001; Wayuhuerd et al., 2010). Other recent studies have shown a strong positive correlation between intention for consistent condom use and all other TPB constructs (Assefa & Haidar, 2013; Eggers et al., 2016; Hwang & Chung, 2011; Protogerou et al., 2012; Wayuhuerd et al., 2010). These findings emphasize how all three TPB constructs may be significant predictors of condom-use behaviors.

TPB may be considered an adequate theoretical framework for explaining health behaviors by predicting individuals' readiness to engage in a particular behavior.

Emphasizing the role of intention and psychological constructs in South Korean female

college students' condom-use behaviors will guide us in understanding this phenomenon. As shown above, previous studies provide evidence that each construct (i.e., attitudes toward behavior, subjective norms, self-efficacy, and barriers) has its own crucial and unique relationship to the performance of the target behavior. In this regard, an improved understanding of each construct may highlight core aspects of related health behaviors in emerging adulthood. However, we believe that using only TPB in our study would not be adequate. Given the unique and contemporary social and cultural context in South Korea, the TGP was added so that condom-use behaviors could be examined among female emerging adults in our study. To our knowledge, we are the first to combine TGP and TPB to examine the phenomenon of interest, which helped generate relatively comprehensive results taken important concepts in both theories into account.

CHAPTER III

METHODS

Purpose of the Study

The purpose of the present study was to explore if condom-use behaviors could be predicted by sexual double standards, sexual assertiveness, and sexual security based on the TGP and attitudes, subjective norms, self-efficacy, and barriers toward condom use based on the TPB. The dependent variable is current condom-use behaviors; sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, and barriers to condom use are the seven independent variables (Table 1). To date, few studies have focused on predictive relationships between factors that may affect young Koreans' (un)safe sexual behavior and actual condom use. By identifying the weights of the predictors, this study aims to uncover the factors that influence South Korean college students' condom-use behaviors. As the behavior of condom use may also differ depending on gender, age, sexual orientation, and marital status, we restrict our target population to heterosexual unmarried female emerging adults. Our findings of this study might contribute to the future development of sexual education programs tailored to unmarried South Korean female college students. The study's long-term goal is to develop and test such an intervention targeting South Korean female emerging adults.

Table 1

Description of Dependent and Independent Variables

Variables		Constructs
Dependent variable		Condom-use behaviors
Independent variables	TGP	Sexual double standards
		Sexual assertiveness
		Sexual security
	TPB	Attitudes
		Subjective norms
		Self-efficacy
		Barriers

Specific Aims

The specific aims of the study among female emerging adults in South Korea are as follows:

Aim 1. To descriptively examine demographic characteristics including sex-related information (i.e., age, college year, major, religion, current type of residence, family's perception toward sexual behavior, experience of sex education since becoming a college student, age of first sexual intercourse, condom-use experience, engagement in sexual intercourse, number of sexual partners, types of sexual partners, previous STD diagnosis, experience of unwanted pregnancy, and experience of forced sexual intercourse with a partner), predictors of condom-use behaviors (i.e., sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, and barriers toward condom use), and condom-use behaviors.

Aim 2. To determine whether bivariate relationships exist among sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, barriers, and condom-use behaviors.

Aim 3. To examine predictors derived from the TGP (i.e., sexual double standards, sexual assertiveness, and sexual security) and TPB (i.e., attitudes, subjective norms, self-efficacy, and barriers to condom use) of condom-use behaviors.

Method

Research design. This study used a cross-sectional, correlational design to investigate predictors of condom-use behaviors based on the concepts included in the TGP (i.e., sexual double standards, sexual assertiveness, and sexual security) and concepts included in the TPB (i.e., attitudes, subjective norms, self-efficacy, and barriers toward condom use).

Setting and sample. The present study investigated a target population of sexually active, South Korean unmarried heterosexual women in emerging adulthood, aged 18–25. This age group was selected for three reasons. First, during this period, humans frequently begin developing intimate relationships and engage in sexual activities (Alexander et al., 2014). Second, college students in South Korea lack access to systematic sex-related information either before or after entering college (Song & Chae, 2010). Third, compared to other age groups, adults in their 20s have the highest infection rates for STDs and new cases of HIV/AIDS in South Korea (G. Y. Cho & Kim, 2014).

The present study focused only on unmarried women for four reasons. First, the purpose and method of contraception may vary depending on marital status (Hwang &

Chung, 2012; South Korea Institute for Health and Social Affairs, 2015; South Korea Institute for Health and Social Affairs, 2018). For instance, according to a report from the South Korea Ministry of Health and Welfare in 2011, condom use was the highest—by a significant margin—among unmarried females (65.5%), while condom use (29%) and extra-vaginal ejaculation (27.5%) occurred most among married females, also by a significant margin. Second, female adults between 19 and 34 years showed a higher prevalence of STDs (especially gonorrhea and chlamydia) and HIV, compared to males and other age groups (South Korea National Institute of Health, 2016). Third, female college students are particularly vulnerable to consequences of unsafe sexual practices such as unplanned pregnancies, single parenthood, and abortions, which could influence their future sex life and marriage (E. M. Lee & Kim, 2017; J. Y. Lee, 2017).

Given that individuals' marital status can affect behavior, responses, decisions, and negotiations around condom use, limiting our sample to unmarried women should minimize the possibility of affecting condom-use behaviors among married emerging adults (Statistic Korea, 2019). Fourth, gender and power dynamics related to Confucian patriarchy and male domination influence actual condom-use behaviors in different ways (Haberland, 2015; J. H. Kim et al., 2018). Indeed, unequal power dynamics in relationships may cause a higher incidence of violence, a greater likelihood of reporting IPV, and may reduce women's negotiation power for using condoms (Jewkes & Morrell, 2010).

There are several reasons for limiting the present study to heterosexual women in South Korea. According to a survey by the organization for economic cooperation and

development (OECD; K. M. Lee, 2019), while acceptance of the LGBTQ population continues to grow in South Korea, it is still low. For instance, between 2001 and 2014, the OECD global average score was 5.1 points on a 1–10 scale, but in South Korea, the score was 2.8 during the same period (K. M. Lee, 2019). This suggests that non-normative sexuality is not well accepted in South Korea. Moreover, according to a report by the South Korea Ministry of Culture, Sports and Tourism (2015), most young gay men and lesbians indicated that social attitudes toward the LGBTQ population are negative (91.3%) and that it is not easy to live in society as a gay man or lesbian. South Korea's low acceptance of non-normative sexual orientations and gender identities can put LGBTQ people at risk for discrimination and may explain why they are not “coming out” publicly. Some LGBTQ Koreans feel unable to reveal their sexual preferences because of familial pressure or social concerns (National Human Rights Commission of South Korea, 2015). Considering these social aspects of life in South Korea, LGBTQ participants may hesitate with reference to being open about their sexual orientation and experiences. An additional reason for limiting our sample to heterosexual women is because lesbian sexual relationships carry a different sexual health risk profile.

We used convenience sampling, also known as nonprobability sampling (Polit & Beck, 2017), to recruit participants. This type of sampling is more cost- and time-effective than probability sampling (Bornstein, Jager, & Putnick, 2013), and it provides an uncomplicated way of selecting participants who meet the inclusion criteria. Many online methods rely on some form of nonprobability sampling (Dillman, Smyth, & Christian, 2014). Convenience sampling also provides convenient access to populations of

interest (Etikan, Musa, & Alkassim, 2016). In other words, with convenience sampling, researchers can conduct their investigation using an easily reachable population or group.

We employed this sampling technique to recruit respondents primarily using Facebook. Facebook is one of the most popular online social networks globally, and has a higher use rate in South Korea (65.7%), as compared to other popular local social networks, such as KakaoStory (49.6%), Instagram (41.0%), and Band (33.3%; South Korea Ministry of Science and ICT, 2019). Among South Koreans aged 3 years and over, 90.4% are mobile Internet users, but the rate of Internet use is highest among people in their 20s and 30s, at 99.99% (South Korea Ministry of Science and ICT, 2019). Examining Social Networking Service (SNS) use trends by device, the amount of SNS use is far higher for mobile phones than for other devices, at 62.4% (South Korea Information Society Development Institute, 2018). Moreover, in 2017, the overall rate of SNS use was 45.8%; the highest rate was among people in their 20s (83%; South Korea Information Society Development Institute, 2018), with an average of 1 hour and 18 minutes per day (South Korea Information Society Development Institute, 2018). However, studies using SNS to collect data on Korean college students have been limited, despite these promising trends.

In the present study, inclusion criteria for participants were as follows: (a) identifying oneself as female; (b) being enrolled in college for the current academic year; (c) being between 18–25 years old; (d) having been engaged in sexual intercourse; (e) being unmarried; (f) being heterosexual; (g) being able to communicate in Korean; and (h) being able to access the Internet.

Our sample size for multiple linear regression, using a fixed-model R^2 deviation from zero, was calculated using G*Power 3.1.9.2 (Faul, Erdfelder, & Buchner, 2009). This analysis revealed that 160 participants were needed for an effect size of .15 (medium), power of .80, and a significance level of .05. A total of 224 participants were recruited, but the final sample was 170 due to the incompleteness or completion of the survey in less than 5 minutes. For example, if the participants' incompleteness rate was less than 88% for the total survey or finished completing the survey less than 5 minutes, they were excluded from the analysis.

Measurement instrument. The present study used self-report questionnaires with items that assessed sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy (i.e., PBC), barriers, and condom-use behaviors. Gender and power are very important factors that influence sexual and reproductive health behaviors and outcomes worldwide (Haberland, 2015; Jewkes & Morrell, 2010). The present study focused on two constructs derived from TGP: the structure of affective attachments and social norms (both are viewed as a single construct) and the sexual division of power. These two constructs highlight the gender-based inequalities and disparities that exist in society; thus, they are useful for understanding risks associated with condom avoidance and STD/HIV transmission in a population of young women versus young men. Although some studies have compared gender differences in condom use, few studies have addressed the roles of gendered power dynamics in condom use among unmarried young people in South Korea. Thus, we also measured sexual double standards, sexual assertiveness, and sexual security, derived from the TGP.

Additionally, the present study drew on the following constructs from TPB: attitudes, subjective norms, self-efficacy (i.e., PBC), and barriers toward condom use. In this instance, TPB is a health behavior theory that partly explains young people's involvement in unsafe or risky sexual behavior and decision-making regarding condom use. This theory defines behavior as specific actions performed by individuals, encountered as a function of their readiness to perform certain behaviors and PBC (Ajzen, 1991; Fishbein & Ajzen, 1975), positing that changes in intention or readiness to perform a given behavior lead to behavioral changes. In previous studies, the four constructs mentioned above are significant variables associated with condom-use behaviors among young people. Understanding the weight and significance of each construct can highlight the core aspects of this issue and reflect young people's health behaviors. Thus, the TPB is a helpful theory to explain female emerging adults' condom-use behaviors by indicating factors of individuals' current actual condom use. However, using only TPB is not adequate to comprehensively capture the phenomenon of interest. Therefore, both TGP and TPB were combined to guide the present study.

Demographic characteristics. We assessed participants' personal information, including their sexual experiences. Demographic characteristics were identified using self-reported questionnaires and included age, college year, major, religion, current type of residence, family's perception toward sexual behavior, experience of sex education since becoming a college student, age of first sexual intercourse, condom-use experience in the past 6 months (i.e., the dependent variable), engagement in sexual intercourse in the past 3 months, number of sexual partners over the past 3 months, types of sexual

partners over the past six months, previous STD diagnosis, experience of unwanted pregnancy, and experience of forced sexual intercourse with a partner. Details are provided in Table 2.

Table 2
Description of Demographic Characteristics

Variable	Options
Age (years)	18, 19, 20, 21, 22, 23, 24, or 25
Year in college	Freshman, sophomore, junior, or senior
Major	Humanities & Social Sciences, Science & Technology, Health & Medical, Arts & Physical Education, or other
Religion	Protestant, Catholic, Buddhism, none, or other
Type of residence (current)	Home, with relatives, boarding house, living alone, dormitory, or other
Family's perception toward sexual behavior	Conservative, neutral, or open
Receiving sex education since becoming a college student	Yes/no
Age at first sexual intercourse	≤ 10 , 11–15, 16–20, or 21–25
Condom-use experience in the past six months	Never (0%), rarely (25%), sometimes (50%), often (75%), or always (100%)
Having had sexual intercourse over the past three months	Yes/no
If yes, number of sexual partners over the past three months	1, 2–3, or ≥ 4
Types of sexual partners over the past six months	Committed monogamous (steady), regular casual, or unexpected (hook-ups or one-night stands)

Table 2

Cont.

Variable	Options
Having had STDs	Yes/no
Having had an unwanted pregnancy	Yes/no
Have ever been forced to have sexual intercourse from partner	Yes/no

Constructs derived from the TGP. Sexual double standards, sexual assertiveness, and sexual security were measured by capturing gender norms and power imbalances. First, sexual double standards were measured using the Double-Standards Scale (DSS), originally developed by Caron, Davis, Halteman, and Stickle (1993) and cross-culturally adapted and validated in Korean by Nam (2003). The DSS consists of 10 items, based on a 5-point Likert scale with the responses range from 1 (*strongly disagree*) to 5 (*strongly agree*). A total score for the instrument was obtained by summing each of the item scores. The possible scores range from 10 to 50. Higher scores indicate higher double standards toward sexuality. In other words, females are subordinate to males when having sexual relationships. The Cronbach's alpha for the total scale score was .72 in the original study and .77 in the South Korean sample reported by Nam (2003). In the present study, the Cronbach's alpha for the total scale score was .77 and the greater lower bound (GLB)—which is a powerful but lesser-known estimator of reliability that is based on assumptions from the Classical Test Theory (Chakraborty, 2017)—was .91 (JASP Team, 2019). In the present study, we also use GLB for several reasons. First, research indicated that GLB produces better results than α and ω (Trizaono-Hermosilla & Alvarado, 2016).

Additionally, while GLB's assumptions are not as strict as those of Cronbach's alpha, GLB is still conceptually similar (McNeish, 2018). Indeed, Cronbach's alpha and other single-administration measures like split-half reliability are based on the same principle as GLB, with the exception that they inefficiently estimate $Cov(E)$ and therefore do not exceed the theoretical GLB value. Furthermore, GLB determines the maximal values for the error component of observed scores that are consistent with the data; hence, reliability that is calculated using these maximum errors should yield the lowest possible value for reliability (McNeish, 2018).

Next, sexual assertiveness was measured using the Sexual Assertiveness Scale (SAS), originally developed by Morokoff et al. (1997) and cross-culturally adapted into Korean by M. H. Choi (2005). The SAS consists of 18 items using a 4-point Likert scale, with responses ranging from 1 (*never*) to 4 (*always*). A total score for the instrument was obtained by summing each of the item scores. The possible scores range from 18 to 90. Higher scores indicate higher sexual assertiveness and sexual autonomy. The Cronbach's alpha for the total scale score was .82 in the original study as well as M. H. Choi's (2005) study. In this study, Cronbach's alpha for the total scale score was .53. However, in this study, GLB was .70, suggesting good internal consistency of the tool.

Finally, sexual security was measured using the Global Measure of Sexual Satisfaction (GMSEX), developed by Lawrance and Byers (1995). The GMSEX consists of five items, with lower scores indicating less sexual satisfaction during a sexual relationship. Responses ranged from *good to bad*, *pleasant to unpleasant*, *positive to negative*, *satisfying to unsatisfying*, and *valuable to worthless* using a 7-point Likert-type

scale. Participants were asked to circle the number which best described their (main) sexual relationship. Ratings are summed so that possible scores range from 5 to 35; lower scores indicate less sexual satisfaction during a sexual relationship (T. D. Fisher et al., 2011). Cronbach's alpha of the entire scale was .96 in the original study (Lawrance & Byers, 1995). In this study, Cronbach's alpha for the total scale score was .93, and GLB was .94. In the present study, we used the GMSEX-Korean version, which our team cross-culturally translated it from the GMSEX-English version. Translation procedure and methods were the same as the Sexual Risk Behavior Beliefs and Self-Efficacy Scale (SRBBS), which will be described in detail below.

Constructs derived from the TPB. In preparation for the present study, we translated the SRBBS based on the World Health Organization (2008) translation guidelines. This measure was chosen because it emphasizes aspects of sexual risk-taking behaviors using variables derived from the theory of reasoned action, social-learning theory, and the health-belief model (T. D. Fisher et al., 2011). We measured attitudes and norms related to condom use, self-efficacy of condom use, and barriers to condom use. The SRBBS consists of 22 items, measured on a 3- or 4-point Likert scale. Ratings were summed so that possible scores range from 5 to 20 on attitude and subjective norms, 9 to 27 on self-efficacy, and 3 to 12 on barriers to condom use. High values reflect a greater intention to abstain from risky sexual behaviors; for barriers to condom use, lower scores reflect an increase in awareness (Farmer & Meston, 2006). In sum, people who had positive norms and held positive attitudes toward condom use were more likely than others to consistently use condoms (Mirzaei, Ahmadi, Saadat, & Ramezani, 2016).

The original study by Basen-Engquist et al. (1999) was conducted with 6,213 high school students from Texas and California. Internal consistency of the sub-categories, as indicated by Cronbach's alpha, ranged from .70–.78 (i.e., .78 for attitudes toward sexual intercourse, .78 for norms related to sexual intercourse, .70 for self-efficacy in refusing sex) (Basen-Engquist et al., 1999). In the present study, Cronbach's alpha for the total scale score was .69, and GLB was .79. Both Cronbach's alpha and GLB were also calculated by subscale: for Attitudes toward Sexual Intercourse, Cronbach's alpha was .54, and GLB was .76; for Norms Related to Sexual Intercourse, Cronbach's alpha was .61, and GLB was .77. Scores for Self-Efficacy in Refusing Sex were .76 for Cronbach's alpha and .87 for GLB, and Barriers to Condom Use scores were .59 for Cronbach's alpha (Cronbach's alpha for Barriers to Condom Use was not measured in the original study) and .64 for GLB.

Basen-Engquist et al.'s study (1999) also included a confirmatory factor analysis (CFA) to verify the construct validity of the scale. Two constructs—intercourse involvement and condom use—were separately tested, and the final data showed a good fit to the model (T. D. Fisher et al., 2011). However, no adapted Korean version of the tool exists. Cha (2005) only translated the section concerning subjective norms related to condom use, consisting of only three items. To address this issue, we translated the entire SRBBS into Korean and assessed its validity and reliability. As no tools with good psychometric properties to measure TPB constructs previously existed in Korean, our study contributes to the larger body of research by providing a new reliable and valid SRBBS-Korean version.

We conducted our translation process following the World Health Organization (2008) guidelines for cross-cultural adaptation, including semantic translation. The forward translation was carried out by two independent translators whose first language is Korean. The researcher in charge of the present study was involved in the forward translation, along with an assistant professor from the Department of Nursing at Wonkwang University, South Korea. Both forward translators were fluent in Korean and English. Afterward, an expert panel review identified and resolved inconsistencies between the original English and translated Korean versions. Four experts, including the two experts from the forward translation phase, were involved in this process, making minor revisions to account for social and cultural factors. The other two panelists were doctoral students from the School of Nursing at Ewha Women's University in Seoul and whose expertise is in sexual behavior. After the revisions, two independent translators fluent in English and Korean back-translated the tool. One translator is an assistant professor in the School of Nursing at Clemson University in South Carolina, USA, and the other is a professor in the School of Nursing at Hallym University in Chuncheon, South Korea. Both professors have a research focus on child and adolescent nursing.

Next, all of the six experts compared and discussed the English and Korean versions to derive the pre-final Korean version of the tool. Subsequently, five experts (excluding the author) rated each item on the Korean version (options included: strongly disagree, disagree, agree, and strongly agree). A content validity index (CVI) was calculated was found to be 1.0, suggesting 100% content agreement on all items of the Korean version of the SRBBS (KR-SRBBS). Finally, we recruited 10 South Korean

undergraduate students at Suwon Women's University in South Korea to establish face validity. All students stated that the tool was easy to understand and had a good flow. The only suggestion from three students was to modify item #21 minimally for better clarity. The toll was finalized based on the suggestion (see Figure 2).

Forward translation	Two translators (T1 & T2) : Translating the instrument from English to Korean.
Expert panel	Four experts (T1, T3, T4, & T5) : Identify and clarify expression and concpets of the translation (ensuring semantic translation).
Back translation	Two translators (T6 & T7) : Back translating the instrument into English.
Expert committee review	Six experts (T1, T2, T4, T5, T6, & T7) : Comparing and discussing the two versions of the tool to derive the pre-final Korean version. Five experts (T2, T4, T5, T6, & T7) : Rating the pre-final Korean version (options ranging from strongly disagree-strongly agree). PI calculated the content validity index (CVI).
Pre-testing	Pre-testing the translated version with 10 undergraduate female college students in South Korea (5 seniors, 1 jounior, and 4 sophomores).
Final version	In total, 22 questionnaires of the KR-SRBBS were produced.

Note. T= Translator

Figure 2. The Process of Translating and Adapting SRBBS.

Data Collection Procedures

Data collection. The choice of a method or combination of methods for data collection depends on various factors, including the accessibility of the population and the nature of the questions the researchers ask. In the present study, an Internet-based survey was carried out using Qualtrics software. This data collection method was selected for several reasons. First, it limits the need for face-to-face interactions. Mostly, Likert-scale responses were collected, through self-report questionnaires, rendering the questionnaires less intrusive.

Furthermore, the present study focuses on descriptive understanding, and scaled responses are less likely to generate non-verbal reactions (Dillman et al., 2014). Second, sex-related topics are still considered sensitive and taboo to a large extent in South Korea, regardless of changes in recent years, and Internet-based surveys have the benefit of allowing participants to respond anonymously, from the comfort of their preferred locations (Dillman et al., 2014). Third, although Internet-based surveys are not entirely cost-free, the costs incurred are far lower than those of face-to-face, mailed, or telephone surveys (Dillman et al., 2014). As a result, using an Internet-based survey allowed us to sample many potential respondents online and to easily collect data at a very low cost (Dillman et al., 2014). Finally, the Internet can be a useful way to survey college students who are very likely to be familiar with its use on a range of technological devices. Taking these benefits together, we decided to use Internet-based surveys for the present study.

Before data collection, we obtained approval for the study from the University of North Carolina at Greensboro. After receiving approval, we posted advertisements on the

Facebook pages of the principal investigator (PI), Jungmin Lee, and those of relevant large college organizations, as well as by other mechanisms (e.g., departmental and student associations' group chats), to recruit participants. Relevant organizations were contacted through their social media managers to obtain approval for the advertisement, after which the study recruitment advertisement was posted to their Facebook pages and other mechanisms (e.g., group chat). We received approval from two Universities in South Korea. The Korea University social media manager only approved the distribution of the advertisement through the group's chat via the messenger application, rather than directly on their Facebook page and other online channels. The manager of the group chat invited the PI to post an introduction and recruitment advertisement. Our snowball sampling strategy was used at the end of the survey when participants were asked if they knew others who would potentially qualify to participate in the study. If a participant knew a suitable candidate, they were asked to forward the name and contact information of the PI to that person or share the advertisement containing the link to the survey. The potential participant then contacted the PI directly or clicked and followed the link when they were interested in participating.

Qualtrics software was used to invite eligible participants to participate in the study directly. An information sheet was used instead of a consent form, as a signed consent would serve as a source of identifying information. A consent form was deemed impractical and unnecessary; instead, the information sheet was posted on the first page of the Qualtrics survey, detailing the basic eligibility requirements and instructing students to click on the link if they were willing to participate using their preferred

devices, such as smartphone, laptop, or desktop. After perusing the information sheet, students were asked to click *yes* if they agreed to participate in the study. In this way, informed consent was obtained before the students proceeded with the survey. The information sheet informed participants of the purpose of the study and explained the researchers' credentials, information regarding confidentiality, and the voluntary nature of participation. On the information sheet, we clearly stated that completing the questionnaire, estimated to take approximately 7–10 minutes, was voluntary.

Moreover, participants were required to complete CAPTCHAs, provided by Qualtrics to weed out automated spam-bots, before proceeding with the survey. Participants were asked to click, "I am not a robot" to start the survey. For clarity and readability, before the actual survey distribution, we conducted a pilot test with 10 South Korean female college students. There were no major changes after the pilot test. Only slight wording changes were made in the instructions and questions to improve the flow of the survey. The actual time required for completion of the entire survey varied between 7 and 15 minutes in the pilot test, indicating that participants should be able to complete the questionnaire in the allotted time. Considering the minimum time required for completing the survey, we excluded surveys that were completed in less than 5 minutes to ensure validity.

If participants agreed to proceed with the survey, a closed-ended questionnaire was provided online. After the survey, participants were asked to leave their email address if they were willing to receive a KRW 3000 (US \$3) convenience-store gift card. After reviewing their responses, we sent gift cards through email if participants

completed their survey and responded to all items. Participants were provided with a link to a separate survey to submit necessary contact information (in the form of an email address) to claim the electronic gift card. A separate survey was used to ensure that the contact information could not be linked to their questionnaire responses. All emails sent by the PI to the participants (to claim their incentive) were permanently deleted. At which time the desired sample size was reached, access to the link was closed.

Data management. The data were collected anonymously. No identifying information was collected, and the survey questions contained no identifying information. The Qualtrics list that contained participants' email addresses for the gift-care incentive was printed once, kept in a locked cabinet in the office of Dr. Ross (Faculty Advisor, School of Nursing, University of North Carolina at Greensboro), and shredded one week after data collection was completed to allow incentives to be sent and any questions or undelivered emails be returned to the PI. Collected online questionnaires were assigned a unique identification number (e.g., 001, 002, and 003) for data management and analysis. All data were numerically coded for each variable, remained on a password- and firewall-protected personal computer, and were backed up to UNCG Box, a secure and password-protected server at The University of North Carolina at Greensboro. All data were de-identified and considered 1-lock data, according to UNCG's Information Technology Services. Qualtrics data were stored on secure servers equipped with firewalls, which were password protected and accessible only to the PI and Dr. Ross, faculty advisor. The collected data were also electronically transferred from Qualtrics survey software to SPSS, downloaded to a password- and firewall-protected personal computer, and backed

up to UNCG Box. Additionally, all data were uploaded to a research group folder on UNCG Box and will be securely maintained for a minimum of 5 years following the end of this study, after which it will be permanently deleted with a program such as Erasure.

Protection of Human Subjects

Before completing the survey, potential participants were notified that (a) there would be no negative consequences for nonparticipation; (b) the survey would be anonymous, and no individual responses would be reported; (c) participants would have the right to withdraw from the study at any time without repercussions; and (d) personal privacy and confidentiality would be guaranteed. However, for those completing the survey online, absolute confidentiality of data provided through the Internet could not be guaranteed due to the limited protections of Internet access; nevertheless, this was clearly described in the information sheet. There was minimal risk to study participants, although the research topic had the potential to lead to embarrassment while filling out the questionnaire. Qualtrics has the advantage of allowing respondents to access the survey at any time, at their own convenience. If the survey was conducted through other methods, such as face-to-face, mail, or telephone surveys, participants might have faced inconveniences in their surrounding environment where, for instance, peer pressure or the gaze of others could have affected participants and dissuaded them from responding to the questionnaire openly or honestly. Given that sex-related topics are sensitive, we used Qualtrics to help participants feel more comfortable while responding to the survey questionnaire. When students used Qualtrics, Internet protocol (IP) address tracking was turned off.

Furthermore, while Facebook may have tracked participants who clicked the study link, Facebook could not track whether participants completed the survey or the responses they had provided. Additionally, no identifying information about the participants was collected, and respondents will not be identified in any report or publication. All information obtained in this study is strictly confidential unless disclosure is required by law.

After completing the survey, we asked participants to provide brief comments or suggestions concerning the topics that were discussed. We also provided participants with three links to resources on the South Korean CDC, which provides basic information on the use of condoms to prevent STD/HIV transmission. These links were available on the Qualtrics page with the incentive link, where each individual's email information was gathered in a separate Qualtrics database not linked to survey responses. Findings could offer a basic understanding of the predictors of risky sexual behavior among South Korean college students, which is a major potential benefit of this research to the participants. Further, findings will help with the development of an appropriate approach to sex education in the future. Thus, the long-term goal of the present study is to reduce sex-related health problems, such as HIV/AIDS, other STDs, and unwanted pregnancies among South Korean college students.

Data Analysis

Descriptive and inferential statistical analyses were carried out using SPSS version 25.0 (IBM Corp, 2017). In order to achieve Aim 1, descriptive statistics were

used to describe and summarize the participants' demographic characteristics, including general sex-related information and questionnaire scores.

No previous research has provided evidence of cutoff points for sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, or barriers toward condom use. Therefore, participants' scores (high, moderate, or low) were obtained before the study, based on norm-referenced standard-setting methods, to assess individual students' performance relative to the performance of the whole group. Norms can be used to characterize examinee groups, while statistics can be used to summarize each group's level of each cognitive variable (AERA, APA, & NCME, 2014). In the present study, norm-referenced standard-setting methods were calculated using averages, median scores, and standard deviations. For example, after the average and median scores of 10 items related to sexual double standards were calculated, the median score was used as the cutoff point to determine high/low levels. Participants in the median range were considered to have moderate sexual double standards, while those with scores below the median were considered to have low sexual double standards. This same procedure was used to assess other independent variables.

For Aim 2, we planned to use Pearson's correlation coefficient, but its assumptions for normality was violated. Thus, Spearman's rho was used to determine relationships among the factors (i.e., sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, barriers, and condom use behavior) of South Korean college female students. All analyses were two-tailed, with the significance level set at $p < .05$.

For Aim 3, first, we examined the associations between condom-use behaviors and demographic and sex-related characteristics to find statistically significant characteristics as potential controlled variables. However, none of the characteristics were significant.

Thus, we proceeded to multiple linear regression without the above characteristics. However, we found violations of the regression assumptions of the presence of an extreme outlier, normality, and homoscedasticity. Thus, gamma regression was utilized to determine the associations between factors: sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, and barriers based on condom-use behaviors, and to what degree they predict condom-use attitudes, subjective norms, self-efficacy, and barriers toward condom-use behaviors among South Korean female college students.

CHAPTER IV

RESULTS

The purpose of this study was to identify the determinants of condom-use behavior among female emerging adults in South Korea. This chapter reports the results of the statistical analyses used to investigate the predictors affecting condom-use behavior based on the TGP and TPB. This chapter proceeds as follows: the description of the participants' demographic characteristics including their sexual experience and questionnaire scores on independent variables (i.e., sexual double standards, sexual assertiveness, sexual security, attitude, subjective norms, self-efficacy, and barriers to use condoms) (Aim 1); the results of association among seven factors driven from TGP and TPB (Aim 2); and a test of the regression to determine the factors affecting condom-use behavior among female emerging adults in South Korea (Aim 3).

Aim 1

Aim 1 was to descriptively examine South Korean female college students' demographic characteristics (i.e., age, year in college, major, religion, and type of residence), sex-related characteristics (i.e., sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, and barriers toward condom use), and condom-use behaviors.

As shown in Table 3, participants include 170 female emerging adults between 18 and 25 years old ($M=20.97$, $SD=1.76$). The largest proportion of participants was 22 and

23 years (33.5%, $n=57$), followed by 20 to 21 (30.6%, $n=52$), and 18 to 19 (28.2%, $n=48$). Participants 24 to 25 years of age made up the smallest proportion of participants (7.7%, $n=13$). Almost two-fifths of participants were freshmen (38.2%, $n=65$), followed by sophomores (24.1%, $n=41$), and juniors and seniors (18.8%, $n=32$, respectively). Almost half of the participants (44.7%, $n=76$), were majoring in humanities and social science, while 24.1% ($n=41$) were health and medical majors, and the rest consisted of other majors. The majority of participants responded that they were not religious (62.9%, $n=107$), followed by 17.1% ($n=29$) who indicated they were Protestant, 12.9% ($n=22$) were Catholic, those who indicated they were Buddhist accounted for 5.3% ($n=9$), and other religious beliefs accounted for 1.8% ($n=3$). The majority (70%, $n=119$) of the participants responded that they were living at home with family or relatives, followed by living alone (22.9%, $n=39$) or in a dormitory (7.1%, $n=12$). Almost half of the participants responded that their family's perception toward sexual behavior could be described as neutral (47.6%, $n=81$), followed by conservative (40%, $n=68$), and open (12.4%, $n=21$).

Along with general demographic characteristics, respondents' general sex-related information was also gathered and analyzed. Fifty percent of participants responded that they had received sex education since becoming a college student. Most participants responded that their age at first sexual intercourse was 16-20 years (64.1%, $n=109$), followed by 21-25 years (35.3%, $n=60$) and 11-15 years (0.6%, $n=1$). Four-fifths of participants (84.1%, $n=143$) had sexual intercourse over the past three months, and among these, the majority (72.9%, $n=124$) responded that they had one sexual partner

during this period, while 11.2% ($n=19$) had two to three partners. More than 80% of participants (81.2%, $n=138$) responded that they had monogamous (steady) sexual partners over the past 6 months. The remaining participants were having sexual intercourse with regular (casual) sexual partners (17.1%, $n=29$), and a small number were having unexpected (hook-ups or one-night stands) relationships (1.8%, $n=3$). Most of the participants responded that they had not had STDs (94.7%, $n=161$), had not had an unwanted pregnancy (98.2%, $n=167$), and had not been forced to have sexual intercourse with their sexual partners (88.2%, $n=150$). Regarding condom-use behaviors in the past 6 months, nearly half of the participants (45.9%, $n=78$) responded that they always used condoms, 22.9% ($n=39$) often used condoms, 12.4% ($n=21$) rarely used condoms, while 10.6% ($n=18$) were never accounted for, and 8.2% ($n=14$) responded that they sometimes used condoms.

Table 3

Demographics, Sex-related Characteristics, and Condom-use Behaviors of the Participants ($N=170$)

Demographics	Classification	N (%)	Mean \pm SD (Min-Max)
Age (years)	18-19	48 (28.2)	20.97 \pm 1.759 (18-25)
	20-21	52 (30.6)	
	22-23	57 (33.5)	
	24-25	13 (7.7)	
Year in college	Freshman	65 (38.2)	
	Sophomore	41 (24.1)	
	Junior	32 (18.8)	
	Senior	32 (18.8)	

Table 3

Cont.

Demographics	Classification	N (%)	Mean \pm SD (Min-Max)
Major	Humanities & Social Science	76 (44.7)	
	Science & Technology	24 (14.1)	
	Health & Medical	41 (24.1)	
	Arts & Physical Education	20 (11.8)	
	Other	9 (5.3)	
Religion	Protestant	29 (17.1)	
	Catholic	22 (12.9)	
	Buddhist	9 (5.3)	
	None	107 (62.9)	
	Other	3 (1.8)	
Type of residence (current)	Home or with relatives	119 (70.0)	
	Living alone	39 (22.9)	
	Dormitory	12 (7.1)	
Family's perception toward sexual behavior	Conservative	68 (40.0)	
	Neutral	81 (47.6)	
	Open	21 (12.4)	
Receiving sex education since becoming a college student	Yes	85 (50.0)	
	No	85 (50.0)	
Age at first sexual intercourse (years)	11–15	1 (0.6)	
	16–20	109 (64.1)	
	21–25	60 (35.3)	
Having had sexual intercourse over the past three months	Yes	143 (84.1)	
	No	27 (15.9)	
If yes, number of sexual partners over the past three months	1	124 (72.9)	
	2-3	19 (11.2)	

Table 3

Cont.

Demographics	Classification	N (%)	Mean \pm SD (Min-Max)
Types of sexual partners over the past six months	Committed monogamous (steady)	138 (81.2)	
	Regular casual	29 (17.1)	
	Unexpected (hook-ups or one-night stands)	3 (1.8)	
Ever had any STDs	Yes	9 (5.3)	
	No	161 (94.7)	
Ever had an unwanted pregnancy	Yes	3 (1.8)	
	No	167 (98.2)	
Have ever been forced to have sexual intercourse with partner	Yes	20 (11.8)	
	No	150 (88.2)	
Condom-use behaviors in the past six months*	Never (0%)	18 (10.6)	
	Rare (25%)	21 (12.4)	
	Sometimes (50%)	14 (8.2)	
	Often (75%)	39 (22.9)	
	Always (100%)	78 (45.9)	

*Note. Dependent variable

Description of sexual risk behavior instrument scores. Sexual double standards were measured with the DSS (see Table 4). In the present study, sexual double standards are defined as gender norms or attitudes toward sex that shape individuals' perceptions of sexual behaviors, thereby creating different standards for men and women.

Table 4

Description of Average Participant Scores on the Four Measures of Sexual Risk Behavior toward Condom Use ($N=170$)

Instrument	<i>n</i> (%)			Mean \pm SD	Score range	Median (Min-Max)
	Low	Moderate	High			
Sexual double standard score	75 (44.1)	22 (12.9)	73 (43.0)	15.62 \pm 4.928	10-50	15.0 (10-33)
Sexual assertiveness score	76 (44.7)	10 (5.9)	84 (49.4)	60.79 \pm 4.555	18-90	61 (50-71)
Sexual security score	84 (49.4)	10 (5.9)	76 (44.7)	27.46 \pm 5.429	5-35	28.0 (5-35)
Attitude score	56 (32.9)	44 (25.9)	70 (41.2)	13.98 \pm 2.26	5-20	14.0 (5-18)
Norm score	60 (35.3)	46 (27.1)	64 (37.6)	13.82 \pm 2.44	5-20	14.0 (5-18)
Self-efficacy score	81 (47.6)	18 (10.6)	71 (41.8)	22.48 \pm 3.08	9-27	23.0 (9-27)
Barrier score	61 (35.9)	43 (25.3)	66 (38.8)	6.06 \pm 1.92	3-12	6.0 (3-11)

Note. The median was considered to be a moderate score, while participants with scores below the median (Median – 1*IQR) were considered to have low scores, and scores above the median (Median + 1*IQR) were considered to be high.

The DSS consists of 10 items. Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) using a 5-point Likert-type scale. A total score for the instrument was obtained by summing each of the item scores, including reversing the one negative item (#8). All possible scores range from 10 to 50. In the present study, scores ranged from 10 to 33. Higher scores indicate more adherence to traditional double standards. The mean

score on the DSS was 15.62 ($SD=4.928$), and the median score was 15. The norm-referenced standard-setting methods were calculated using the average score, median scores, and standard deviations. Here, participants with a median were considered as exhibiting moderate sexual double standards, while those with scores below the median ($\text{Median} - 1 * \text{IQR}$) were considered to have low sexual double standards, and scores above the median ($\text{Median} + 1 * \text{IQR}$) were considered to have high sexual double standards. Almost half of our participants (44.1%, $n=75$) exhibited a low score on sexual double standard, indicating less adherence to the traditional double standard. This was followed by 43.0% ($n=73$) of our participants exhibiting a high sexual double standard score, and 12.9% ($n=22$) exhibiting a moderate sexual double standard score.

Sexual assertiveness was measured with the SAS. In the present study, sexual assertiveness is defined as the power to claim, refuse, and prevent sexual relations or intentions from others. The SAS consists of 18 items. Responses ranged from 1 (*never*) to 4 (*always*) using a 4-point Likert-type scale. A total score was obtained by summing each item, and reverse scoring nine negative items (#3, #4, #6, #7, #8, #10, #13, #14, and #16). All possible scores range from 18 to 90. In the present study, scores ranged from 31-68, with higher scores indicating a greater ability to initiate sex if desired, refuse unwanted sexual practice or contact, and negotiate condom use to prevent pregnancy and STDs with a sexual partner. The mean score on sexual assertiveness was 60.79 ($SD=4.56$) and the median score was 61.0. For sexual assertiveness, 49.4% ($n=84$) of the participants scored higher than the median, followed by 44.7% ($n=76$) of participants who scored lower, and 5.9% ($n=10$) of participants exhibited with moderate sexual assertiveness.

Sexual security was measured using the GMSEX instrument. In the present study, sexual security is defined as women's sense of being sufficiently empowered to make decisions and negotiate with their partners.

The GMSEX consists of five items. A total score was obtained by summing each item using a 7-point Likert-type scale: *good–bad*, *pleasant–unpleasant*, *positive–negative*, *satisfying–unsatisfying*, and *valuable–worthless*. All possible scores range from 5 to 35. In the present study, the scores ranged from 5 to 35, with higher scores indicating greater sexual satisfaction during a sexual relationship. The average mean score was 27.46 ($SD=5.43$), and the median score was 28. Nearly half of our participants exhibited low sexual security (49.4%, $n=84$), indicating less sexual satisfaction during a sexual relationship. This was followed by 44.7% ($n=76$) of participants reporting high sexual security, and 5.9% ($n=10$) reporting moderate sexual security.

Attitudes, norms, self-efficacy, and barriers to condom use were measured with the SRBBS. In the present study, attitudes toward condom use are defined as the positive or negative assessment of the use of condoms, which influences college students' intention to use condoms. Subjective norms are defined as the norms of significant referents (e.g., parents, peers, and partners) toward condom use. Next, self-efficacy is defined as the belief in one's ability to perform a certain behavior successfully. Barriers toward condom use are defined as the level of difficulty that individuals experience when purchasing or carrying a condom. Finally, intention toward condom use is the sum of attitudes, subjective norms, self-efficacy, and barriers to condom use scores.

The two negative items (#2 and #7) were reverse-coded. All possible scores range from 5 to 20 on attitude and subjective norms, 9 to 27 on self-efficacy, and 3 to 12 on barriers to condom use. In the present study, scores ranged from 5-18 on attitude and subjective norms toward condom use, 9-27 on self-efficacy toward condom use, and 3-11 on barriers to condom use, with higher scores (all except barriers to condom use) indicating a greater intention to abstain from risky sexual behaviors. In contrast, higher scores for barriers to condom use indicate less awareness of condom use.

The average mean score on attitude toward condom use was 13.98 ($SD=2.26$) and the median score was 14. Two-fifths of participants exhibited a high score on sexual attitude toward condom use (41.2%, $n=70$), followed by low (32.9%, $n=56$) and moderate scores (25.9%, $n=44$). Next, the average mean score on subjective norm toward condom use was 13.82 ($SD=2.44$), and the median score was 14. Over three-eighths (37.6%, $n=64$) of participants exhibited high scores for subjective norms toward condom use, followed by low (35.3%, $n=60$), and moderate scores (27.1%, $n=46$). The average mean score on self-efficacy toward condom use was 22.48 ($SD=3.08$), and the median score was 23. Almost half of the participants ($n=81$) exhibited low self-efficacy scores, followed by high (41.8%, $n=71$) and moderate scores (10.6%, $n=18$). Lastly, the average mean score on barriers to condom use was 6.06 ($SD=1.92$) and the median score was 6. For barrier to condom use, almost equal proportions were observed for low and high scores (38.8%, $n=66$ for high; 35.9%, $n=61$ for low), followed by moderate (25.3%, $n=43$) scores.

Aim 2

Aim 2 was to determine whether bivariate relationships exist among sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, barriers, and condom-use behaviors among South Korean female college students (Table 5).

Pearson's correlation coefficient assumes normality when measuring correlations between variables, but this assumption was violated; thus, we used Spearman's rho, a nonparametric test, to measure correlations based on ranked values.

Associations among the TGP and TPB variables are presented below, based on the nature of their negative and positive associations. The magnitude of the association is also presented, based on cutoff values asserted by Polit (2010); $r = 0.01$ for low; $r = 0.03$ for moderate; $r = 0.05$ for strong.

Negative association among variables. A statistically significant negative association was found between sexual double standards and sexual assertiveness (moderate; $r_s = -0.36$, $p < .001$); sexual double standards and self-efficacy (moderate; $r_s = -0.38$, $p < .001$); sexual assertiveness and barriers to condom use (low-to-moderate; $r_s = -0.22$, $p = .004$); sexual security and attitude (low; $r_s = -0.18$, $p = .019$); and self-efficacy and barriers to condom use (low; $r_s = -0.22$, $p = .004$).

Positive association among variables. A statistically significant positive association was found between sexual double standards and barriers to condom use (low-to-moderate; $r_s = 0.27$, $p < .001$); sexual assertiveness and attitude (low; $r_s = 0.17$, $p = .030$); sexual assertiveness and subjective norms (low; $r_s = 0.15$, $p = .048$); sexual

assertiveness and self-efficacy (moderate-to-strong; $r_s = 0.49, p < .001$); sexual assertiveness and condom-use behaviors (low; $r_s = 0.20, p = .010$); attitudes and subjective norm (strong; $r_s = 0.64, p < .001$); attitudes and condom-use behaviors, (moderate-to-strong; $r_s = 0.46, p < .001$); and subjective norm and condom-use behaviors (moderate; $r_s = 0.38, p < .001$).

Table 5

Spearman's Correlation Coefficient and p -values of Relationships between Sexual Behavior Factors among South Korean Female College Students ($N=170$)

	1	2	3	4	5	6	7	8
1. Sexual double standards								
2. Sexual assertiveness	-.356*** ($<.001$)							
3. Sexual security	-.027 (.731)	.045 (.563)						
4. Attitudes	-.081 (.292)	.166* (.030)	-.180* (.019)					
5. Subjective norms	-.143 (.062)	.152* (.048)	-.075 (.329)	.642*** ($<.001$)				
6. Self-efficacy	-.383*** ($<.001$)	.486*** ($<.001$)	.077 (.318)	.131 (.089)	.147 (.055)			
7. Barriers	.271*** ($<.001$)	-.223** (.004)	-.079 (.307)	.051 (.506)	-.006 (.934)	-.221* (.004)		
8. Condom-use behaviors	.001 (.988)	.197* (.010)	-.092 (.231)	.459*** ($<.001$)	.380*** ($<.001$)	.126 (.102)	.009 (.909)	

Note. * $p < 0.05$, ** $p < .01$, *** $p < .001$

Aim 3

Aim 3 was to examine predictors driven from TGP (i.e., sexual double standards, sexual assertiveness, and sexual security) and TPB (i.e., attitudes, subjective norms, self-efficacy, and barriers to condom use) on condom-use behaviors among South Korean female college students.

We checked the following multivariate assumptions for multiple regression: (a) multicollinearity, (b) independence, (c) normality, (d) linearity, and (e) homoscedasticity (Polit, 2010).

First, for the multicollinearity assumption, Variance Inflation Factors (VIFs) larger than seven indicate multicollinearity. In the present study, all VIFs were under seven (ranging from 1.025-2.077), indicating that there was a low correlation among predictors. In other words, there was no evidence of multicollinearity in the model.

Second, for the independence assumption, we assessed the study design and Durbin-Watson statistic. Based on our cross-sectional correlational design, we assumed that data collected from participants would be independent. Additionally, the Durbin-Watson statistic was 2.058, within the range of 1.5 and 2.5, indicating no autocorrelation.

Third, for the normality assumption, we examined outlier residuals using boxplots, Normal $Q-Q$ plots, and the Shapiro-Wilk test. Only one extreme outlier (#107) was detected, and the normal $Q-Q$ plot supported the normality assumption. However, p -values for the Shapiro-Wilk test were all $p < .05$, suggesting the opposite, namely that the assumption of normality of the residuals was violated. Additionally, multivariate normality was examined using residual plots and performing a scatterplot of the standardized residuals (SDRs) versus standardized predicted values from the linear regression (Figure 3). A somewhat unequal distribution of the plots above and below the zero residual axis suggests that the normality assumption has not been met; thus, we concluded that the normality assumption is violated.

Regarding linearity, the points in the plot appeared randomly scattered, suggesting that the assumption of linearity is reasonable. For the homoscedasticity assumption, the SDR versus Predicted Y plots exhibited a cone pattern, suggesting possible non-constant variance of the residuals (i.e., heteroscedasticity).

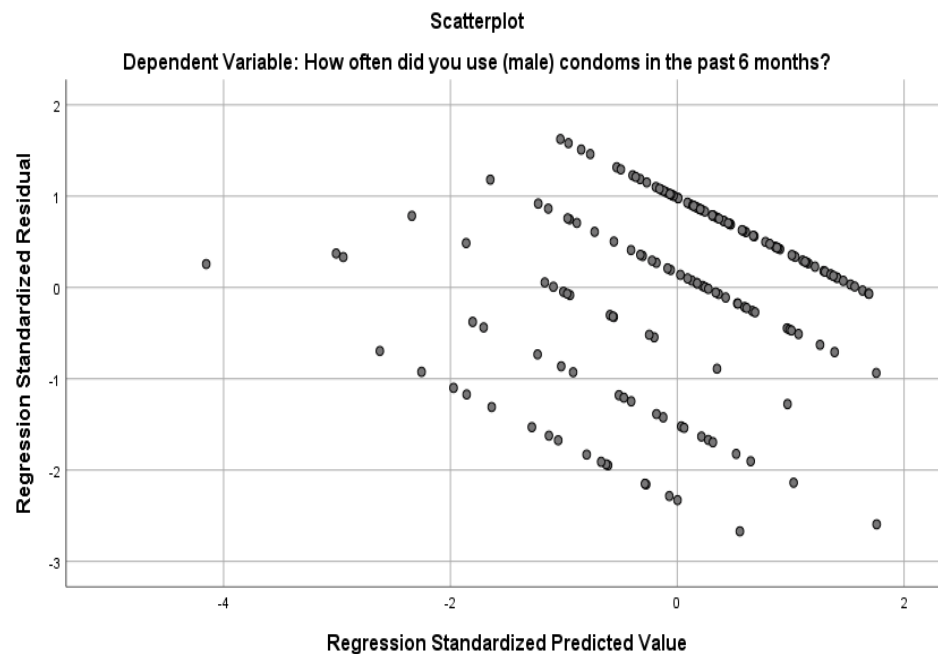


Figure 3. Standardized Residuals (SDRs) Versus Standardized Predicted Values from the Linear Regression.

In sum, the presence of an extreme outlier, and violations of normality and homoscedasticity suggested that regression assumptions were violated. Therefore, all independent and dependent variables were transformed using two different methods, namely, square root and log transformations (Polit, 2010). However, these transformations could not correct the residual normality problem; thus, gamma regression

was used as an alternative method, as it does not require the assumptions of residual normality to be met, or the removal of extreme outliers.

Results from the gamma regression are presented in Table 6. Our findings show that the sexual double standard was the only significant predictor of condom-use behaviors based on TGP. The predicted mean frequency of condom use is 1.7% increased when the sexual double standard score increases by 1 point, adjusting for sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, and barriers toward condom use (Exp (B) = 1.017, 95% CI = 1.002-1.033, $p = .022$). Here, the predicted mean condom use exhibited statistically significant changes, as $p = 0.022$. Thus, one's sexual double standard score was significantly related to condom use; when the sexual double standard score increased, the predicted average frequency of condom use also increased. The 95% CI for the slope was 1.002-1.033; therefore, if our study were performed repeatedly, using 170 participants each time, the true population slope of the multiple regression of frequency of condom use on sexual double standard in points would be enclosed by the interval (1.002-1.033) approximately 95% of the time. Next, the predicted mean frequency of condom use was 1.1% increased when the sexual assertiveness score increases by 1 point, after adjusting for other independent variables (Exp (B) = 1.011, 95% CI = 0.994-1.027, $p = .202$). Additionally, the predicted mean frequency of condom use was 0.1% decreased when the sexual security score increased by 1 point, after adjusting for other independent variables (Exp (B) = 0.999, 95% CI = 0.988-1.010, $p = .851$).

Lastly, the findings based on TPB showed that attitude was the only significant predictor of condom-use behaviors. The predicated mean frequency of condom use was 8.1%, 2.5%, 1.1%, and 0.6% increased when the attitudes, subjective norms, self-efficacy, and barriers toward condoms use scores increase by 1 point, after adjusting for other independent variables (Exp (B) = 1.081, 95% CI = 1.040-1.123, $p < .001$; Exp (B) = 1.025, 95% CI = 0.991-1.061, $p = .153$; Exp (B) = 1.011, 95% CI = 0.987-1.036, $p = .380$; Exp (B) = 1.006, 95% CI = 0.973-1.041, $p = .711$). Among the variables driven from TPB, only attitude scores toward condom use predicted mean condom-use behaviors exhibited statistically significant changes ($p < .001$). When scores on attitude toward condom use score increases, condom-use behaviors also increased. The 95% CI for the slope was 1.040-1.123. Therefore, if the study were repeatedly performed, using 170 participants each time, the true population slope of the multiple regression of frequency of condom use on sexual double standard in points would be enclosed by the interval (1.040-1.123) approximately 95% of the time.

Table 6

Gamma Regression Results ($N=170$)

	Variables	Exp (B)	95% CI	p -value
Condom use	Sexual double standard	1.017	1.002-1.033	.022
	Sexual assertiveness	1.011	0.994-1.027	.202
	Sexual security	0.999	0.988-1.010	.851
	Attitudes	1.081	1.040-1.123	<.001
	Subjective norms	1.025	0.991-1.061	.153
	Self-efficacy	1.011	0.987-1.036	.380
	Barriers	1.006	0.973-1.041	.711

Note. * $p < 0.05$, ** $p < .01$, *** $p < .001$

Chapter Summary

In sum, the average age of the participants was 21 years old. Most of them were freshmen, majored in humanities and social science, not religious, and living with their families and relatives. Also, two out of five reported that their family's perception of sexual behavior was conservative. Regarding sex-related information, half did not receive sex education since in college, three out of five had sex for the first time between 16 and 20 years, and four out of five had sexual intercourse within the past 3 month and had sexual intercourse within the past 6 months. On average, one out of ten had had STDs, unwanted pregnancy, and forced sexual intercourse. Lastly, for condom-use behavior, a little over half had not always used condoms during sexual intercourse.

For questionnaire scores, the sexual double standard mean score was low, indicating participants had open and progressive gender standards and a positive outlook on gender equality. Mean scores for sexual assertiveness, attitude, subjective norms, and barriers toward condom use were moderate. These results suggest participants' moderate ability to initiate sex if desired, refuse unwanted sexual practice or contact, negotiate condom use to prevent pregnancies and STDs, and purchase or carry condoms. Finally, sexual security and self-efficacy scores were high, indicating participants had high sexual satisfaction during sexual relationships and strong intention to abstain from risky sexual behaviors.

Condom use behavior had a significant positive correlation with sexual assertiveness, attitudes, and subjective norms toward condom use. Moreover, the findings showed that sexual double standards and attitudes toward condom use were significantly

predicting condom-use behavior among female emerging adults in South Korea. In detail, attitude toward condom use was a better predictor than sexual double standards.

CHAPTER V

DISCUSSION

This chapter explores the relevance, significance, and meaning of the results and discussed in relation to the aims of the present study. There are three specific aims in the present study among female South Korean college students. Aim 1 was to obtain descriptive information about the demographic characteristics, general sex-related information, sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, and barriers toward condom-use behaviors. Aim 2 was to investigate relationships among independent and dependent variables, namely sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, barriers, and condom-use behaviors. Aim 3 was to examine the predictors of condom-use behaviors based on the TGP and TPB. More details are described below.

Aim 1

Aim 1 was to provide descriptive information about the demographic characteristics, general sex-related information, sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, and barriers toward condom-use behaviors.

This study included 170 South Korean female college students; one-third were 22-23 years old, and most were freshmen, majored in Humanities and Social Science, not religious, and living with their families and relatives. Two out of five participants

reported that their family's perception toward sexual behavior was conservative. Regarding their general sex-related information, half did not receive sex education since in college, and three out of ten had sex for the first time between 16-20 years old. Four out of five had had sexual intercourse within the past 3 months and had had sexual intercourse with steady partners within the past 6 months. On average, one out of ten had had STDs, unwanted pregnancies, and forced sexual intercourses. A little over half had not always used condoms when having sex. For predictors of condom-use behaviors, overall, sexual double standards mean score was low. Mean scores for sexual assertiveness, attitude, subjective norms, and barriers toward condom use were moderate. Lastly, sexual security and self-efficacy toward condom use mean scores were high. Results from this aim are further discussed below.

Owing to the influence of traditional Confucian culture, the subject of sex is not addressed freely and openly among South Koreans (B. M. Kim & Park, 2015; Koh & Suk, 2011). Indeed, in the present study, two out of five participants reported that their families' attitudes toward sexual behavior were conservative, similar to the findings of previous studies. Koh and Suk (2011), for example, found that 74.8% ($n = 625$) of young people described their families' views as conservative and moderate. In B. M. Kim and Park's (2015) study with 218 female college students, 88.1% ($n = 192$) reported that their parents had closed and neutral attitudes toward sex. Additionally, previous studies conducted in college students found that parent-child communication influenced children's sexual attitudes, behaviors, values, self-esteem, and assertiveness (Jang & Lee, 2011; B. M. Kim & Park, 2015). In Korea, conservative attitudes toward sex-related

communication cause challenges not only between parents and their children but also among extended family members, making it difficult to engage in active and beneficial sex-related conversations at home (M. O. Kim, 2013). The nature of sexual communication between parents and children, or among other family members, can vary widely, depending on social perceptions and other sociocultural aspects, such as intergenerational differences in sex education, sexual identity, and sexual behavior (M. O. Kim, 2013). B. M. Kim and Park's (2015) findings illustrate how open communication between South Korean parents and children rarely occurs effectively or actively.

Results from the present study showed that half did not receive sex education since in college. These results are in line with previous research among male and female college students in South Korea (M. O. Kim, 2013). M. O. Kim (2013) found that among 218 female college students, 89.4% had last received this education in elementary or middle school. Indeed, only 1.8% of participants had received sex education after entering college (M. O. Kim, 2013). Importantly, Min et al. (2019) reported that existing sex education activities did not have a positive impact on sex education based on 275 college students' perceptions. Among those who were interested in receiving sex education, 20% were interested in contraception and abortion ($n = 55$), 14.9% in sexual physiology (pregnancy and childbirth; $n = 41$), and 13.1% in sexual intercourse and STDs ($n = 36$).

Age of first sexual intercourse. In the current study, three out of five participants reported that they had their first sexual intercourse when they were between 16 and 20

years old. Similar results have been reported in previous studies among college students in South Korea (H. Y. Kim, 2019; J. H. Kim et al., 2018). For example, J. H. Kim et al. (2018) reported that 77.8% of their 81 participants had their first experience after 18 years of age. H. Y. Kim (2019) observed that college students' average age of first sexual intercourse to be 19.18 years. In contrast, one study conducted by Y. J. Kim (2014) showed that most of the 388 college students had their first sexual intercourse experience when they were older (i.e., 20-24 years old), and in the study by M. O. Kim and Ha (2018), 85.1% of their 315 participants had their first sexual intercourse between 18 and 23 years. Also, in a national survey in 2015, the average age of first sexual intercourse was 22.8 years old (South Korea Disease Control Headquarters, 2015). Compared to the past, our results suggest that the age of college students' engaging in sexual intercourse is getting lower. A structured sex education program tailored to the needs of female emerging adults in South Korea should be introduced before or during the first year of college.

Unwanted pregnancy. In the present study, participants who had an unwanted pregnancy accounted for only 1.8% of the respondents. This number is lower than previous studies with a range of unwanted pregnancies reported between 4.9% and 35.6% (Y. J. Kim, 2014; G. M. Lee et al., 2013; Shin, Park, Bae, & Cha, 2010). Y. J. Kim's (2014) study found a low percentage of reported pregnancies within the 388 South Korean college student participants: 4.9% ($n = 19$) had experienced a pregnancy, and 3.6% ($n = 14$) had had an abortion. In a study by Shin, Park, Bae, and Cha (2010), out of the sexually experienced emerging adults in South Korea, 11.6% ($n = 266$) reported that

they or their partner had experienced a pregnancy; among them, 94.4% ($n = 251$) had had an abortion. Additionally, in a study conducted with 135 Korean college students, 35.6% ($n = 48$) reported experiencing a pregnancy in the past, and 25.9% ($n = 35$) had had an abortion (G. M. Lee et al., 2013). The present study had a small sample size compared to the previous studies; thus, the findings from present the study may have contributed to the lower rate of unwanted pregnancies compared to existing studies.

Forced sexual intercourse. In the present study, 11.8% ($n = 20$) of participants reported being forced to have sex by a partner. Most previous studies examined a combination of all kinds of sexual assaults (i.e., attempted rape, fondling or unwanted sexual touching, and forced sexual intercourse), did not single out forced sexual intercourse, and reported higher rates of combined sexual asserts (J. H. Cho & Song, 2017; Y. J. Kim, 2014). For instance, Y. J. Kim (2014) reported that 11.1% ($n = 43$) of college students had experienced sexual harassment, violence, or abuse. J. H. Cho and Song (2017) showed that many of South Korean college students had experienced sexual assault more than once during their sexual relationships. In a relationship where partners have disagreements or where there is coercion by a sexual partner, sexual behavior can evolve into date rape, violence, and abuse (Shim et al., 2012; WHO, 2014a). Therefore, forced sexual intercourse should be further studied using a larger sample size.

STDs. The long-term effects of STDs may damage young people's future sexual lives and health (Dittus et al., 2015). In the current study, 5.3% ($n = 9$) of participants had had an STD, which is similar to previous research (M. O. Kim & Ha, 2018; Shin, Park, & Hong, 2010). For example, M. O. Kim and Ha's (2018) results showed that 6.4% ($n = 12$)

of the 315 undergraduate college students had a history of STDs. Similarly, Shin, Park, and Hong (2010) found that, among 2,285 college students, 7.1% ($n = 163$) reported having had an STD. In contrast, Park et al.'s (2017) study showed that 75% ($n = 114$) of Korean young people had been infected with one or more STD; however, the majority of participants were male students ($n = 237$, 29 females), which may have resulted in different findings from the present study.

Number and type of sexual partners. In the present study, most participants had sex with one steady partner, which is similar to previous research (Eo, Lee, & Kim, 2014; Jo et al., 2014; H. Y. Kim, 2019). For instance, Eo et al. (2014) demonstrated that most participants (68.7%, $n = 46$) had one sex partner, and Jo et al. (2014) determined that nine out of 10 participants (90%, $n = 208$) had sex with someone they loved. Moreover, H. Y. Kim (2019) also discovered that female college students had sexual intercourse with steady, loved partners (59.2%). In contrast, Jo et al. (2014) found that, among 685 female college students, 37.2% had had two to five sex partners. K. E. Lee (2014) also found that 57.5% ($n = 23$) of the female college student participants reported having more than two sex partners. Although there were conflicting results for the number and type of sexual partners, the findings generally indicated that some college students still have sex with more than one steady partner and act in the moment without preparation, which may increase the possibility of experiencing STDs and unwanted pregnancies. The findings of this study also showed that one out of 10 had sexual intercourse with two to three sexual partners within the past 3 months, and nearly one out of five had sexual intercourse with casual and unexpected sexual partners within the past 6 months. Having sexual

relationships with multiple partners may have placed them at risk for STD infections; thus, in future research, close attention is needed for those who are at the most risk.

Condom-use behaviors. In the present study, about half of participants responded that they always used condoms during sex, similar to findings of the Korean Women's Development Institute (2018) reporting 59.2%, and the South Korea CDC (2016) reporting 46.7% of youth who have sexual intercourse. However, in other studies, that percentage was much lower (Jo et al., 2014; M. O. Kim & Ha, 2018; G. M. Lee et al., 2013c). In Jo et al.'s (2014) study, among 685 female college students, 32% ($n = 74$) responded that they always used contraceptives. M. O. Kim and Ha's (2018) rate was much lower, accounting for only 16% ($n = 30$). Moreover, G. M. Lee et al. (2013) also reported a lower rate of condom use, showing that most Korean college students sometimes used condoms (60%, $n = 81$), while only 7.4% ($n = 10$) always used condoms. Thus, about 50–80% of young adults still do not use a form of contraception during sexual intercourse.

The results of more current research do not differ from those of two previous studies, conducted over 10 years ago on Korean college students' condom use, in which 14.8% of 2,385 respondents reported they always used condoms (A. R. Sohn & Chun, 2005). Among another set of respondents, 17.8% of male students and 14.8% of female students claimed they always used condoms during sex (A. Sohn & Chun, 2007). Even if condom use has slightly increased compared to past results, the rate is still low, as previous studies have shown that some college students have high levels of unsafe sex with multiple partners and have engaged in sexual intercourse without using condoms.

Thus, by providing practical information on the right to choose contraceptive methods that can lead to safer sexual behaviors, college students can prevent unwanted consequences resulting from unsafe sex. Furthermore, in the present study, those who never or rarely used condoms accounted for 13% ($n = 39$) of the participants. Because these participants are most at risk, further studies should explore in-depth their cultural background related to their condom-use behavior.

Descriptive scores of continuous variables.

Sexual double standards. Traditional sex roles have a significant effect on both unmarried men and women, as unconscious patriarchal sex roles are the main cause of difficulties in contraception use (Hwang & Chung, 2014). In the current study, the sexual double standard score was low ($M = 15.62$), indicating open and progressive gender standards, and a positive outlook on gender equality. Comparatively and within the same target population, J. H. Kim et al.'s (2018) mean score was 21.73, suggesting that current female college students have slightly higher adherence to the traditional double standard than those in previous studies.

However, one study conducted with unmarried Korean female adults between the ages of 30 and 40 (K. H. Kim & Cho, 2019), which also used the same questionnaire as in the present study, showed an average sexual double standards score of 18.54 (K. H. Kim & Cho, 2019) among college students—slightly higher than the current results. This may suggest that more younger females in South Korea, in this study, are more open and support gender equality than older women.

Sexual assertiveness. In the present study, the sexual assertiveness score was moderate. Compared to previous studies among South Korean female college students that used the same instrument, the current results were slightly higher ($M = 60.79$), suggesting that they were more likely to initiate sex if desired, to refuse unwanted sexual practices or contact, and to negotiate condom use to prevent pregnancy and STDs (Y. H. Kim et al., 2013; B. M. Kim & Park, 2015). For example, Y. H. Kim et al.'s (2013) mean sexual assertiveness score was 55.41, and B. M. Kim and Park's (2015) was 52.12. Therefore, the results from the present study have added new knowledge regarding sexual assertiveness among female emerging adults in South Korea.

Sexual security. To our knowledge, the present study is the first to examine sexual security in South Korea. Therefore, our study results need to be compared and discussed with those outside South Korean culture. In our study, the sexual security score was high, indicating high sexual satisfaction during sexual relationships. Our results are contradictory to those in Spanish cultures. In Sanchez-Fuentes, Santos-Iglesias, Byers, and Sierra (2015) and Sanchez-Fuentes and Santos-Iglesias (2016), the average GMSEX score was 30.51 among Spanish heterosexual females, aged 18–64 years, who had sexual intercourse experience. Additionally, in Sanchez-Fuentes and Sierra's (2015) study, the mean GMSEX score was 28.19 among Spanish heterosexual females, and 29.23 among Spanish heterosexual males aged 18–30 years. Compared to Spanish culture, the sexual security score in the present study was slightly lower. However, since none of the previous studies focused on unmarried female heterosexual emerging adults, we cannot compare our results to these studies. Thus, more research at the national level should be

conducted to replicate the present study in unmarried female heterosexual emerging adults in South Korea.

Attitude toward condom use. In the present study, the attitude score was moderate, indicating that participants had a moderate intention to abstain from risky sexual behaviors and perceived the importance of safe sex. Our results were consistent with those of previous South Korean studies showing that college students had moderate attitude scores (E. M. Kim et al., 2013; Y. H. Kim & Cho, 2014; Y. J. Kim, 2014; Park & Kang, 2013). The fact that college students' attitudes toward contraception were somewhat positive can be deduced from a corresponding fact that college students are more positive and efficient in using contraceptive methods. Findings from previous studies showed that college students were likely to express their attitudes and practice their opinions related to contraception use. Moreover, the fact that attitudes toward condom use strongly predicted condom-use behaviors suggests that college students require an understanding of the needs and reasons for contraception, rather than simply the acquisition of knowledge. Higher education institutions should develop practical and specific sex education programs by incorporating positive attitudes about condom use into actual contraceptive strategies. This could result in healthy sexual relationships and more willingness to use condoms among female emerging adults.

Subjective norms toward condom use. In the present study, the subjective norm score was moderate, indicating that participants exhibited moderate intentions to abstain from risky sexual behaviors. Previous studies conducted with Korean college students also reported moderate subjective norms toward safer sexual behaviors (Hur et al., 2007;

Hwang & Chung, 2011; H. Y. Kim, 2019; Y. J. Kim, 2014). This suggests that safer sexual behaviors may increase when higher numbers of surrounding individuals have positive thoughts toward condom use. Additionally, these findings reinforce other results that subjective norms directly affect safe sexual behaviors and contraception use intentions (Hwang & Chung, 2014; M. O. Kim, 2013). Previous findings indicate that college students are more likely to practice safe sex more often when they receive a greater amount of pressure from the people around them. Therefore, it is necessary to provide an environment where female college students can meet with friends and colleagues to recognize each other's expectations and to share their thoughts on using contraceptives for safer sexual behaviors.

Self-efficacy toward condom use. In the present study, the self-efficacy score was high, indicating that our participants had a strong intention to abstain from risky sexual behaviors. In the context of sexual relationships, the fact that females exhibited positive self-efficacy with the practice of safe condom use suggests a high possibility of regular condom use in future sexual relations. Similar results also emerged in previous studies. Among female college students, J. H. Kim et al.'s (2018) average contraception self-efficacy score was 44.20, and Hwang and Chung's (2014) was 46.16. Both studies used the same instrument, developed by H. S. Kang (2001), with maximum scores of 60 points. Additionally, Do and Seo (2013) found a mean self-efficacy score of 55.15 out of 85 points. As these studies did not use the same instrument, the comparison is limited; however, these scores confirm that current college students show self-efficacy toward

contraceptive use by controlling for problems that may arise during sexual intercourse or as a result of other sexual experiences.

Barriers toward condom use. Owing to limited studies using this concept, the barriers toward condom use scores were compared with studies conducted with similar target populations outside South Korea. In Basen-Engquist et al.'s (1999) study, U.S. youth who consistently used condoms had a mean score of 1.62, while those who did not consistently use condoms had a mean score of 1.77, signifying that consistent users did not find buying or carrying condoms to be as much of a barrier as inconsistent users. In another U.S. study, Farmer and Meston (2006) found an average score of 2.63 among college students. Ito, Kalyanaraman, Ford, Brown, and Miller's (2008) study tested a CD-ROM program with patients from a youth clinic in the United States; the control and intervention groups showed 1.79 and 1.68 points, respectively, concerning barriers toward condom use before the intervention. Lastly, Unis, Johansson, and Sallstrom (2015) reported a mean score of barriers toward condom use of 2.09 among female youth in Sweden. In previous studies, barriers toward condom use scores were calculated by dividing the scores by the numbers of three items in the scale to compare the scale score by sub-categories with ease (scores were 2.02 in the present study). Although similar scores (in the range of ± 2 points) emerged in previous studies and in the present study, it will be interesting to examine barriers concerning condom use in different South Korean sub-populations regarding emerging adults' gender, sexual identity, sexual experience, marital status, and education level.

Aim 2

Aim 2 was to determine relationships between independent and dependent variables, namely sexual double standards, sexual assertiveness, sexual security, attitudes, subjective norms, self-efficacy, barriers, and condom-use behaviors.

In the present study, a significant negative association was found between sexual double standards and sexual assertiveness, sexual double standards and self-efficacy, sexual assertiveness and barriers to condom use, sexual security and attitude, and self-efficacy and barriers to condom use. In contrast, a significant positive association was found between sexual double standards and barriers to condom use, sexual assertiveness and attitude, sexual assertiveness and subjective norms, sexual assertiveness and self-efficacy, sexual assertiveness and condom-use behaviors, attitudes and subjective norm, attitudes and condom-use behaviors, and subjective norm and condom-use behaviors. Results from this aim are further discussed below.

Correlations among predictors of condom-use behaviors.

Sexual double standards. Sexual double standards were negatively correlated with sexual assertiveness and self-efficacy, indicating that lower perceptions of gender equality and higher acceptance of more traditional sexual standards were associated with lower sexual assertiveness and self-efficacy. These findings support E. S. Lee and Kang's (2010) results that women who held more rigid or traditional gender norms had lower sexual assertiveness and self-efficacy in sexual relationships, which may also incur a higher probability of experiencing sexual violence committed by their partners (Oh et al., 2010). Similarly, in Y. H. Kim et al.'s (2013) study, sexual double standards were

negatively correlated with sexual assertiveness, as in S. H. Choi's (2016) and E. S. Lee and Kang's (2014) studies. These authors asserted that women who had traditional sexual attitudes tended to play a passive role in sexual acts, which could impair their sexual autonomy, and eventually lowered their sexual satisfaction (S. H. Choi, 2016; M. O. Kim, 2013; Y. H. Kim et al., 2013; E. S. Lee & Kang, 2014). Two studies (H. J. Kim, 2018; J. H. Kim et al., 2018) found a negative correlation between sexual double standards and self-efficacy. These findings suggest that women who internalize sexual double standards into traditional femininity are more likely to have unwanted sexual behaviors to comply with social expectations and norms.

Additionally, sexual double standards were positively correlated with barriers toward condom use, indicating that women who follow traditional gender stereotypes are more likely to experience difficulties in purchasing or carrying a condom. This result is similar to Hwang and Chung's (2014) finding, which showed that unmarried women actually found it difficult to practice contraception owing to patriarchal gender role stereotypes and that a greater acceptance of open gender roles was related to greater self-efficacy regarding condom use.

Therefore, it may suggest to organize and implement a gender equality education program within colleges to reinforce female students' sexual assertiveness and self-efficacy. This would serve to reduce gender role stereotypes and establish balanced gender roles. Continuous efforts will not only remove the stereotypes that do not promote healthy gender consciousness and awareness but will also reduce feelings of difficulty regarding purchasing or carrying condoms, which may, in turn, increase condom use.

Sexual assertiveness. Sexual assertiveness was positively correlated with attitudes, subjective norms, self-efficacy, and condom use behavior. These findings demonstrate that individuals with high sexual assertiveness actively cope with condom use during sexual relationships that could ultimately result in condom use. Similar findings also emerged in studies by Do and Seo (2013), H. K. Kim (2017), K. W. Kim et al. (2012), Y. H. Kim and Cho (2014), and B. M. Kim and Park (2015). In Do and Seo's (2013) and H. K. Kim's (2017) studies, sexual assertiveness was positively correlated with sexual attitude, indicating that the more positive the gender attitude, the higher the sexual assertiveness. These findings suggest that more positive attitudes toward condom use are related to individuals being concerned with, and respectful of, their own and others' condom-use behaviors. In other words, more positive attitudes are directly related to acting according to one's own decisions rather than the demands of others. Thus, when making sexual decisions, these individuals make judgments autonomously and openly.

Although the results from the present study showed a positive correlation between sexual assertiveness and subjective norms, no other studies have compared these two concepts. Consequently, further research is needed for a comparison to be possible. However, in K. W. Kim et al.'s (2012) study, participants' sexual assertiveness was positively correlated with sexual self-efficacy. Thus, to increase college students' self-efficacy, their sexual assertiveness must improve as well. In Y. H. Kim and Cho's (2014) study, sexual assertiveness was positively correlated with sexual behavior. B. M. Kim and Park (2015) also obtained a similar result. These findings indicate that participants who exhibit low sexual assertiveness also have passive sexual behaviors.

Sexual assertiveness was negatively correlated with barriers toward condom use, indicating that higher sexual assertiveness was associated with fewer difficulties with purchasing or carrying condoms. Although no studies had measured the relationship between sexual assertiveness and barriers toward condom use, we found two studies that measured the relationship between sexual assertiveness and barriers among young people in the United States; that is, fear of sexual powerlessness and cognitive-emotional dysregulation (Ullman & Vasquez, 2015; Zerubavel & Messman-Moore, 2013). The findings from both studies were similar to those observed in the current study, revealing that lower sexual assertiveness was associated with barriers to contraceptive use in sexual relationships. Unfortunately, this association may increase the risk of victimization and sexual problems, such as sexual violence, abuse, assault, and harassment (J. H. Cho & Song, 2017; Y. J. Kim, 2014). However, the willingness to address one's sexual health and to accurately express one's intentions in sexual relationships can protect an individual from such issues. Still, due to differing variables, comparing these results with those of the current study presents a limitation. Therefore, further studies are needed to examine and compare the correlation between sexual assertiveness and barriers toward condom use.

Sexual security. Previous studies have shown that college students are more likely to make sexual behavior judgments and decisions based on previously experienced emotional and cognitive intimacy than other age groups (Alexander et al., 2014; Ertilmaz & Atak, 2011). Our results support the view that experiences from past relationships influence individuals' attitudes toward condom use, which, in turn, impact their condom

use decisions and negotiations with their partners. We found a negative correlation between sexual security and attitudes toward condom use, indicating that greater sexual satisfaction in a previous sexual relationship was associated with a greater negative attitude toward condom use. However, as mentioned above, given that the concept of sexual security is not frequently used in previous studies, to obtain a consistent result, further research is needed to measure sexual security by identifying its relationship with other factors. The results of these future studies could then be compared to those from the present study.

Attitudes toward condom use. Attitude toward condom use was positively correlated with subjective norms and condom use behavior. This finding is similar to Y. J. Kim's (2014) study, in which a positive correlation emerged between attitude and subjective norms toward condom use. These findings indicate that if people are around others who show more positive perceptions of condom use, their attitudes toward condom use will also be more positive. This conclusion supports previous studies in that young people, compared to other age groups, are more likely to modify their behaviors and attitudes when they receive positive feedback on condom use from others, particularly from their peers who are facing similar concerns and pressures (Abdi & Simbar, 2013; Widman et al., 2016). Thus, peer education may be an effective strategy to provide information, training, or resources and to encourage college students to make healthier choices regarding condom use.

Additionally, N. H. Kim et al. (2015) found a positive correlation between attitude and condom use behavior, which supports our findings. When individuals have a positive

attitude toward condom use, they also display more readiness to use condoms, which will eventually lead to safer sexual behaviors. However, these findings are in conflict with other studies. For example, Y. S. Kang and Hwang (2017) found a negative correlation between sexual attitudes and reproductive health-promoting behaviors among female college students, as did Koo and Kim (2017). These studies suggest that the more positive the attitudes are toward condom use, the lower the awareness and consciousness of safe sexual behavior. These conflicting results suggest a need to examine further the relationship between college students' attitudes toward condom use and sexual behaviors.

Subjective norms toward condom use. In the present study, subjective norm toward condom use was positively correlated with condom use behavior. Similarly, Y. J. Kim (2014) found that the higher the subjective norm, the higher the level of safe sex practice. This result is partly consistent with Cha et al.'s (2008) finding, where peer norms were a predictor of condom use in male students. In other words, the greater the pressure from people to use condoms, the more often individuals engaged in condom use. This supports previous studies (Bauermeister et al., 2009; Black et al., 2013; Peçi, 2017) reporting the crucial role of the social environment in young people's sexual behavior. An act that only occurs on the premise of mutual agreement, such as safe sex, can be greatly influenced by accepted social and cultural beliefs or norms. Therefore, to increase college students' readiness for safe sex, they should be educated in specific ways to practice safe sex, taking into account family members and friends who affect youth's subjective norms. Given that social referents are an important factor affecting college students' decision-making processes, further studies that measure the correlation between social referents

and sexual behavior could be helpful. Continuous efforts are needed to develop positive norms and beliefs on sexuality that can lead to safe sex practices, through small group sex education or sexual counseling programs with social referents.

Self-efficacy toward condom use. In the present study, a negative correlation emerged between self-efficacy and barriers toward condom use and is in line with the K. W. Kim et al.'s (2012) study. This finding indicates that lower beliefs in one's personal ability to use condoms leading to more difficulties in purchasing and carrying condoms, and resulting in unsafe sexual practices. In other words, higher self-efficacy is associated with more active cognitive and behavioral coping skills through active condom-use behaviors. However, further studies are needed for comparative purposes, as limited research is available. In sum, it is socially desirable that college students' sex education center on the prevention of unwanted sexual consequences through safe sexual relationships, but it is also necessary for students to increase their self-efficacy to achieve this result.

Aim 3

Aim 3 was to determine predictors of condom-use behaviors based on the TGP and TPB. In the present study, sexual double standards and attitudes were the two significant predictors of condom-use behaviors based on TGP and TPB. Here, attitudes toward condom use was a better predictor than sexual double standards. Results from this aim are further discussed below.

Significant predictors of condom-use behaviors. The purpose of this study was to identify variables affecting condom use in female college students, which will provide

basic data for developing effective sexual education programs for safe sexual behavior and sexual health management. Selected predictors came from our extensive literature review of condom-use behaviors among emerging adults, in combination with the TGP and TPB. This study is meaningful in that it identified condom-use behaviors in the context of gender-driven power dynamics and decision-making processes among female college students in South Korea.

Results from the present study showed that factors influencing condom-use behaviors were sexual double standards and attitudes toward condom use. Specifically, sexual double standards and attitudes toward condom use were significantly positively associated with condom-use behaviors meaning that condom use is increased when the sexual double standard and attitude scores increase. Attitude toward condom use was the stronger predictor of condom-use behaviors than sexual double standards. To our knowledge, our study was the first to use sexual double standards and attitudes as predictors of condom-use behaviors in South Korea. Therefore, we cannot compare our results to any studies. Outside of South Korea, three studies that are worth mentioning showed that attitudes was a predictor of intention to use condoms and not actual condom-use behaviors as in our study (Kocken et al., 2006; Ramírez-Correa & Ramírez-Santana, 2018; Teye-Kwadjo et al., 2017a). Given that the number of previous studies related to our specific predictors is limited, additional studies should be conducted to establish the relevance of condom-use behaviors and to confirm our results.

By recognizing the importance of sexual double standards and attitudes concerning college students' condom use, we recommend that an effective sex education

on condom use be developed around sexual doubled standards and attitudes toward condom use in South Korea. As described in TGP, sexual double standards shape individuals' perceptions of sexual behaviors, creating different standards for men and women. In South Korea, in particular, women have less power in sexual relationships than men in general (AVERT, 2019b; South Korea WomenLink, 2018). Therefore, gender-based inequalities and disparities that exist in South Korea should be minimized at the national level before a sex education program can be fruitful. To be able to convince South Korea as a whole, replicate research with a much larger sample size should be conducted among the target population.

Also, as described in TPB, attitudes are viewed as a positive or negative assessment of the use of condoms, which influences college students' condom-use behaviors. Results from our study showed that the more positive attitudes toward condom use, the more likely the participants used condoms. Thus, when planning contraceptives, including condom use education programs for female college students, enhancing their attitudes toward condom use should be incorporated. Although previous studies showed that knowledge is a weak and inconsistent predictor of individuals' behavioral changes, evidence shows that knowledge is strongly related to attitudes toward sexual behavior in South Korean college students (H. K. Kim, 2017; N. H. Kim et al., 2015; Shin, Park, & Hong, 2010). Therefore, knowledge of adverse sexual health consequences of not using condoms should also be added in sex education programs to increase attitudes toward using condoms, potentially resulting in increased condom use among South Korean female emerging adults.

Strengths and Limitations

The strengths of the study are delineated here. First, the newly translated GMSEX and SRBBS into Korean applied rigorous methods and translation process based on WHO guidelines. These tools in the Korean version are now readily available for future research on condom use and its predictors. Second, the findings from this study have added new knowledge to the area of gender and power imbalances (derived from TGP) related to condom use among South Korean female emerging adults. The TGP used in the present study is novel for South Korea and has introduced new concepts (i.e., sexual double standards, sexual assertiveness, and sexual security) related to condom use. Indeed, sexual double standards was a significant predictor in our study. Future research should include these concepts when condom use is examined. Third, the combination of TGP and TPB is also novel, generating a comprehensive theoretical framework guiding our investigation of condom-use behaviors among South Korean female emerging adults. Lastly, different from most previous studies, we measured emerging adults' actual condom use rather than their intention to use condoms. Thus, results from our study are powerful, practical, and related to the target populations' actual condom-use behaviors. The limitations of this study are related to our use of convenience sampling, unique sample, and relatively small sample size when compared to previous studies on sexual behaviors in South Korea and these limitations may restrict the generalizability of our findings.

Conclusion

The present study is the first to combine TGP and TPB as the guiding theoretical framework to examine condom-use behaviors in South Korea. Our results showed that sexual double standards (from TGP) and attitudes toward condom use (from TPB) predicted condom-use behaviors among South Korean female emerging adults.

Therefore, to promote female college students' condom use in South Korea, it is necessary to include the components of sexual double standards and attitudes toward condom use in future sex education programs. Adding sexual double standards as a key component to such education or intervention programs is crucial, unique, and innovative, as the concept is significant and relevant to contemporary South Korean society.

Subsequently, these novel, sexual double standards-based interventions should be tested for their effectiveness on condom-use behaviors among female emerging adults in Korean culture. Our ultimate goal is to prevent STDs/HIV, unwanted pregnancies, and abortions, preventing adverse psychological consequences among the target population.

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APPENDIX A

QUESTIONNAIRE (ENGLISH)

2020. 2. 10.

Qualtrics Survey Software

English ▼

SURVEY INSTRUCTION

Information sheet

Welcome to the research study!

Project Title: Factors affecting condom use among female emerging adults in South Korea

Principal Investigator: Jungmin Lee

Faculty Advisor: Dr. Ratchneewan Ross

What is this all about?

I am asking you to participate in this research study because you are a female college student aged between 18-25 years. The purpose of this research is to examine factors affecting the intention to use male condoms (hereafter “male” is dropped) among female college students in South Korea. This research project involves filling in a survey that will take about 7-10 minutes. Your participation in this research project is voluntary.

How will this negatively affect me?

There are no known or foreseeable risks involved in this study. However, you may feel embarrassed while filling out the survey.

What do I get out of this research project?

There is no direct benefit for you for participating in the study. However, your participation in this research study may help with the development of appropriate and adequate sex education programs for South Korean college students in the future. The results may help to prevent new STD/HIV transmission among the target population in South Korea.

Will I get paid for participating?

Upon completion of the survey, to thank you for your time, you will get a KRW 3000 (US \$3) convenience-store gift card. We will also provide three links to resources on KCDC, which provides basic information on the use of condoms to prevent STD/HIV transmission. These links will be provided through the Qualtrics page with the incentive link. There are no costs associated with being in this study.

What about my confidentiality?

We will do everything possible to make sure that your information is kept confidential. All information obtained in this study is strictly confidential unless disclosure is required by law. The responses to the survey will NOT have your name or any other identifiable information. We will do everything possible to make sure that your information is kept confidential.

If you complete the online survey, the responses to the survey will be downloaded and exported directly from the survey website (Qualtrics®, which is a secure online survey tool) into a spreadsheet and then uploaded to University of North Carolina at Greensboro (UNCG) box.

For those completing the survey online, absolute confidentiality of data provided through the Internet cannot be guaranteed due to the limited protections of Internet access. Please be sure to close your browser when finished so no one will be able to see what you have been doing. The IP address tracking will be turned off.

Your data will be assigned a code (0001, 0002, 0003, etc.); no name will be used. Only the student investigator (Jungmin Lee) and committee members will have access to the files through UNCG box. The data will be used only for the stated purpose of the study. Your data will be kept confidentially uploaded to the UNCG box (research group folder) for a minimum of five years following the closure of the study and will then be shredded and all electronic data will be permanently deleted.

The only information that is confidential would be providing your email address if you chose to claim an eGift card. If so, this would occur in one of the following ways. If you complete the survey online, upon completion of the survey you will have the choice to provide your email address in order to claim your eGift card. The information provided will not be linked to your survey responses. All emails sent to (or from) the student investigator's university email account will be deleted permanently after the email is sent. The Qualtrics list will be printed one time for email incentives, kept in Dr. Ross locked cabinet in her SON office, and shredded one week after data collection is completed to allow incentives to be sent and any questions or undelivered emails are returned to the PI.

What if I do not want to be in this research study?

You do not have to be part of this project. This project is voluntary, and it is up to you to decide to participate in this research project. If you agree to participate at any time in this project, you may stop participating without penalty. However, due to the nature of the online survey, it is not possible to withdraw participants after providing a gift card. This is because we don't know which response you've created because we can't track the questionnaire you've responded through the email address you've provided. If you withdraw, it will not affect you in any way.

What if I have questions?

You can contact Jungmin Lee who can speak Korean and English by sending an email (j_lee43@uncg.edu) or you can also send an email to Dr. Ratchneewan Ross (r_ross2@uncg.edu) who can speak only English, if you have any questions or comments for the study. If you have concerns about how you have been treated in this study, call the Office of Research Integrity Director at 1-855-251-2351.

☐ I have read the information provided above

You could participate in this study if you belong to all the criteria listed below.

- 1) Identifying oneself as female
- 2) Being enrolled in college for the current academic year
- 3) Being aged 18-25 years old
- 4) Have engaged in sexual intercourse
- 5) Being unmarried
- 6) Being heterosexual
- 7) Being able to communicate in Korean
- 8) Being able to access the Internet

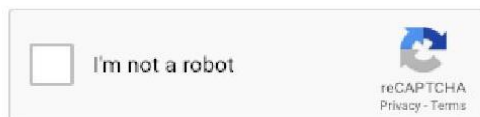
If you believe you belong to all the categories of inclusion criteria listed below, please click "yes" and start the survey.

If any of the categories do not match, please click "no" and thank you for considering to participate in this study.

☐ Yes

☐ No

Before you proceed to the survey,
please complete the captcha
below.



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How old are you?

What year are you in college?

Freshman

☐

Sophomore

☐

Junior

☐

Senior

☐

What is your major?

Humanities &
Social☐Science &
Technology☐

Health & Medical

☐Arts & Physical
Education☐

Others

☐

What is your religion?

Protestant

☐

Catholic

☐

Buddhism

☐

None

☐

Others

☐

What is your current residence type?

Home

☐

With relatives

☐

Boarding house

☐

Living alone

☐

Dormitory

☐

Others

☐

How is the family's allowance for sexual behavior?

Conservative

☐

Neutral

☐

Opened

☐

Did you have sex education since becoming a college student?

Yes

☐

No

☐

Have you ever had sexual intercourse in the past?

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Yes

☐

No

☐

How old were you when you had first sexual intercourse?

Less than 10 years old

☐

11-15 years old

☐

16-20 years old

☐

21-25 years old

☐

How often did you use (male) condoms in the past 6 months?

Never (0%)

☐

Rare (25%)

☐

Sometimes (50%)

☐

Often (75%)

☐

Always (100%)

☐

Did you have sexual intercourse in the last 3 months?

Yes

☐

No

☐

How many sexual partners have you had in the last 3 months?

1

☐

2-3

☐

More than 4

☐

How would you identify your sexual relationship with sexual partners over the past 6 months?

Committed monogamous
(steady)☐

Regular (casual)

☐Unexpected (hook-ups or one-
night stands)☐

Have you ever had STDs?

Yes

☐

No

☐

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Have you ever had an unwanted pregnancy?

Yes

☐

No

☐

Were you ever forced to have sexual intercourse from your partner?

Yes

☐

No

☐

In each following statement, please click on the circle that best fits your belief.

*Condoms in the questionnaire refer to male condoms (not femdom).

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
1. It is expected that a woman be less sexually experienced than her partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. A woman who is sexually active is less likely to be considered a desirable partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. A woman should never appear to be prepared for a sexual encounter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. It is important that the man be sexually experienced so as to teach the woman.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. A good woman would never have a one-night stand, but it is expected of a man.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. It is important for a man to have multiple sexual experiences in order to gain experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
7. In sex the man should take the dominant role and the woman should assume the passive role.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. It is acceptable for woman to carry condoms.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. It is worse for a woman to sleep around than it is for a man.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. It is up to the man to initiate sex.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Below are questions about your reaction to sexual contact with the opposite sex partner. Please click the circle that you think are similar to your most recent or current behavior of sexual relationship.

*Condoms in the questionnaire refer to male condoms (not femdom).

	Never (0%)	Sometimes (25%)	About 50% of the time	Usually (75%)	Always (100%)
1. I begin sex with my partner if I want to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I let my partner know if I want my partner to touch my genitals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I wait for my partner to touch my genitals instead of letting my partner know that's what I want.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I wait for my partner to touch my breasts instead of letting my partner know that's what I want.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I let my partner know if I want to have genitals kissed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	Never (0%)	Sometimes (25%)	About 50% of the time	Usually (75%)	Always (100%)
6. Women should wait for men to start things like breast touching.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I give in and kiss if my partner pressures me, even if I already said no.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I put my mouth on my partner's genitals if my partner wants me to even if I don't want to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I refuse to let my partner touch my breasts if I don't want that, even if my partner insists.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I have sex if my partner wants me to, even if I don't want to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. If I said no, I won't let my partner touch my genitals even if my partner pressures me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I refuse to have sex if I don't want to, even if my partner insists.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I have sex without a condom or latex barrier if my partner doesn't like them, even if I want to use one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I have sex without using a condom or latex barrier if my partner insists, even if I don't want to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. I make sure my partner and I use a condom or latex barrier when we have sex.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	Never (0%)	Sometimes (25%)	About 50% of the time	Usually (75%)	Always (100%)
16. I have sex without using a condom or latex barrier if my partner wants.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. I insist on using a condom or latex barrier if I want to, even if my partner doesn't like them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. I refuse to have sex if my partner refuses to use a condom or latex barrier.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Overall, how would you describe your sexual relationship with your partner?

1) Very bad ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very good

Click to write the question text

2) Very unpleasant ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very pleasant

Click to write the question text

3) Very negative ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very positive

Click to write the question text

4) Very unsatisfying ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very satisfying

Click to write the question text

5) Very worthless ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very valuable

Please click the circle for each question that best describes how you feel.

*Condoms in the questionnaire refer to male condoms (not femdom).

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	Definitely no	Probably no	Probably yes	Definitely yes
1. I believe people my age should wait until they are older before they have sex.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I believe it's OK for people my age to have sex with a steady boyfriend.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I believe condoms (rubbers) should always be used if a person my age has sex.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I believe condoms (rubbers) should always be used if a person my age has sex, even if the girl uses birth control pills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I believe condoms (rubbers) should always be used if a person my age has sex, even if the two people know each other very well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The following questions ask you about your FRIENDS and what they think. Even if you're not sure, mark the answer that you think best describes what they think.

*Condoms in the questionnaire refer to male condoms (not femdom).

	Definitely no	Probably no	Probably yes	Definitely yes
1. Most of my friends believe people my age should wait until they are older before they have sex.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Most of my friends believe it's OK for people my age to have sex with a steady boyfriend.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Qualtrics Survey Software

	Definitely no	Probably no	Probably yes	Definitely yes
3. Most of my friends believe condoms (rubbers) should always be used if a person my age has sex.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Most of my friends believe condoms (rubbers) should always be used if a person my age has sex, even if the girl uses birth control pills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Most of my friends believe condoms (rubbers) should always be used if a person my age has sex, even if the two people know each other very well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What if the following things happened to you? Imagine that these situations were to happen to you. Then tell us how sure you are that you could do what is described.

*Condoms in the questionnaire refer to male condoms (not femdom).

	Not sure at all	Kind of sure	Totally sure
1. Imagine that you met someone at a party. He wants to have sex with you. Even though you are very attracted to each other, you're not ready to have sex. How sure are you that you could keep from having sex?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	Not sure at all	Kind of sure	Totally sure
2. Imagine that you and your boyfriend have been going together, but you have not had sex. He really wants to have sex. Still, you don't feel ready. How sure are you that you could keep from having sex until you feel ready?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Imagine that you and your boyfriend decide to have sex, but he will not use a condom (rubber). You do not want to have sex without a condom (rubber). How sure are you that you could keep from having sex, until your partner agrees it is OK to use a condom (rubber)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Imagine that you and your boyfriend have been having sex but have not used condoms (rubbers). You really want to start using condoms (rubbers). How sure are you that you could tell your partner you want to start using condoms (rubbers)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Imagine that you are having sex with someone you just met. You feel it is important to use condoms (rubbers). How sure are you that you could tell that person that you want to use condoms (rubbers)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2020. 2. 10.

Qualtrics Survey Software

	Not sure at all	Kind of sure	Totally sure
6. Imagine that you use birth control pills to prevent pregnancy. You want to use condoms (rubbers) to keep from getting STD or HIV. How sure are you that you could convince your partner that you also need to use condoms (rubbers)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. How sure are you that you could use a condom (rubber) correctly or explain to your partner how to use a condom (rubber) correctly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. If you wanted to get a condom (rubber), how sure are you that you could go to the store and buy one?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. If you decided to have sex, how sure are you that you could have a condom (rubber) with you when you needed it?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What if the following things happened to you? Imagine that these situations were to happen to you. Then tell us how sure you are that you could do what is described.

*Condoms in the questionnaire refer to male condoms (not femdom).

	I strongly disagree	I kind of disagree	I kind of agree	I strongly agree
1. It would be embarrassing to buy condoms (rubbers) in a store.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I would feel uncomfortable carrying condoms (rubbers) with me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Qualtrics Survey Software

I strongly
disagreeI kind of
disagree

I kind of agree

I strongly agree

3. It would be wrong
to carry a condom
(rubber) with me
because it would
mean that I'm
planning to have sex.



Please write down briefly if you have any comments or suggestions that you may find important in relation to the above topics.

Thank you for participating in this study. If you are willing to receive a KRW 3000 (US \$3) convenience-store gift card, please click the link below.

https://uncg.qualtrics.com/jfe/form/SV_09FvXd9aIbN2b8p

If you know others who would potentially qualify to participate in the study, please give PI's name and contact information to potential participants or share the link below:

https://uncg.qualtrics.com/jfe/form/SV_41YQ3wysARzGa9

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APPENDIX B

QUESTIONNAIRE (KOREAN)

2019. 11. 21.

Qualtrics Survey Software

한국어 ▼

SURVEY INSTRUCTION

Information sheet

연구 설명서

연구 과제명: 한국 성인 진입기 여대생의 콘돔 사용 의도에 영향을 미치는 요인

책임 연구자: 이정민, 지도 교수: Dr. Ratchneewan Ross

연구 설명

본 연구는 성인 진입기의 18세에서 25세 사이의 여대생을 대상으로 연구를 진행하고자 합니다. 해당 되는 연령의 경우 본 연구에 참여하실 수 있습니다. 이 연구의 목적은 한국의 여대생을 대상으로 남성 콘돔 (이후 "남성"이라는 용어는 표현되지 않음) 사용 의도에 영향을 미치는 요소를 조사하기 위함입니다. 귀하가 본 연구의 참여 의사를 밝혀 주시면 설문지를 조사하는 것으로 연구가 진행되며, 설문 작성에는 약 7-10분이 소요될 것입니다. 이 연구는 자발적으로 참여 의사를 밝히신 분에 한하여 수행될 것입니다.

부작용 또는 위험요소

연구 참여로 인해 연구대상자에게 발생할 수 있는 부작용 또는 예측 가능한 위험요소는 없지만 설문지를 작성하는 동안에 당혹스럽거나 대답하기 곱고러울 수도 있습니다.

연구 참여에 따른 이익

귀하가 이 연구에 참여하는데 있어서 직접적인 이익은 없습니다. 그러나 귀하가 제공하는 정보는 향후 한국 미혼 여대생을 위한 적절하고 올바른 성교육 프로그램을 개발하는 데 활용할 수 있는 기초 자료로 도움이 된다는 잠재적인 이득이 있습니다. 또한 본 연구 결과는 한국의 미혼 여대생의 성병과 에이즈 감염과 전파를 예방하는 데 도움이 될 수 있습니다.

연구 참여에 따른 보상

연구 참여시 귀하에게 약 3000원 정도의 편의점 기프트콘이 지급될 것입니다. 또한 성병/에이즈(HIV) 감염과 전파를 방지하기 위해 한국 질병관리본부에서 제공하는 콘돔의 사용법, 성병의 증상, 성병/에이즈(HIV) 예방법의 세 가지 링크도 제공될 것이며, 관련 링크는 설문 후에 인센티브 링크가 포함된 페이지를 통해 제공될 것입니다. 귀하

가 연구 참여로 인해 지불해야 되는 비용은 없습니다.

개인정보와 비밀보장

본 연구의 참여로 귀하에게서 수집되는 개인정보는 없습니다. 연구를 통해 얻은 모든 정보의 비밀 보장을 위해 최선을 다할 것입니다. 이 연구에서 얻은 모든 정보는 법에 의해 공개가 요구되지 않는 한 비밀이 보장될 것이며, 귀하의 답변은 귀하의 이름이나 기타 식별 가능한 정보를 포함하지 않음으로써 철저히 익명으로 처리될 것입니다.

귀하가 온라인 설문조사를 완료하면 설문 조사 웹사이트(Qualtrics®)를 통해 응답 결과를 다운로드하여 노스캐롤라이나 그린스보로 대학교(UNCG)의 보호 파일 폴더 (전자 정보 보관함)에 저장될 것입니다. 다만, 온라인 설문조사라는 특성으로 인해 인터넷 접근과 관련한 절대적인 기밀은 보장할 수 없습니다. 기밀 유지를 위해서 설문을 마치고 난 후 사용하신 브라우저를 반드시 종료해 주시기 바랍니다. 설문조사 웹사이트를 통해 IP 주소를 추적할 수 없도록 설정을 해 둘 것입니다.

귀하게 제공한 모든 정보는 코드(0001, 0002, 0003 등)가 할당되며, 이름과 같은 개인 정보는 사용되지 않습니다. 본 연구의 책임 연구원(이정민)과 공동 연구자 이외에는 다른 사람은 UNCG 보호 파일 폴더에 접근하지 못합니다. 데이터는 연구의 명시된 목적을 위해서만 사용될 것입니다. 연구 종료 후 연구 관련 자료는 5년 동안 UNCG 연구 그룹 보안 폴더에 보관되며 이 후에 절삭기 혹은 전자 보관함을 영구적으로 지움으로써 폐기 될 것입니다.

귀하가 설문 종료 후 보상을 받기 위해 수집되는 유일한 정보는 귀하가 작성하는 이메일 주소입니다. 본 연구에서는 편의점 기프티콘을 지급받기 원하는 대상자에게만 한하여 이메일 주소가 수집될 것입니다. 다만, 귀하가 제공한 이메일 정보는 설문 조사 응답과 연결되어 추적되지 않을 것입니다. 귀하는 연구 책임자의 UNCG 이메일 계정으로 기프티콘을 제공 받게 될 것이며, 귀하가 제공한 이메일 주소는 발송 즉시 영구적으로 삭제될 것입니다. 설문조사 웹사이트를 통해 수집된 이메일 목록은 기프티콘 전송을 위해 한 번만 인쇄되고, Dr. Ross의 간호학과 사무실의 잠긴 캐비닛에 보관되며, 연구자에게 있을 질문 혹은 발송 되지 않은 경우를 대비하여 데이터 수집이 완료된 후 일주일 후까지 보관된 다음 영구적으로 삭제될 예정입니다.

연구 참여 도중 중도탈락

귀하는 연구에 참여하신 후에도 언제든지 도중에 그만 둘 수 있습니다. 본 연구의 참여는 자발적이며, 이 연구 참여에 대한 결정은 귀하에게 달려 있습니다. 만약 귀하가 연구에 참여하는 것을 그만 두고 싶다면 언제든지 연구 참여를 중단할 수 있습니다. 다만, 온라인 설문의 특성 상 기프티콘 제공 후에는 참여 철회가 불가능 합니다. 이는 귀하가 제공한 이메일을 통해 응답된 설문지가 추적 되지 않기 때문에 어떤 응답이 귀하가 작성한 것인지 알 수 없기 때문입니다. 귀하가 본 연구에 참여하지 않더라도 귀하에게는 어떠한 불이익도 없습니다.

연구 문의

본 연구에 대해 질문이 있거나 연구 중간에 문제가 생길 시 본 연구 책임자 이정민 (j_lee43@uncg.edu; 한국어/영어 가능) 혹은 영어로 의사소통이 가능하다면 교수 자문 Dr. Ratchneewan Ross (r_ross2@uncg.edu)에게 언제든지 연락하십시오. 만일 어느 때라도 연구대상자로서 귀하의 권리에 대한 질문이 있다면 연구 안전 담당 사무실 (1-855-251-2351)로 전화바랍니다.

귀하가 아래의 동의 버튼을 누르는 것은 귀하의 연구 참여가 자발적이며, 18세 이상이며, 어떤 이유로든 연구 참여를 종료 할 수 있음을 알고 있는 것이며, 이를 허용한다는 의사로 간주됩니다.

☐ 위의 정보를 읽었습니다

다음은 귀하가 본 연구에 적합한지 알아보기 위한 것입니다.

아래 사항에 모두 해당되시면 본 설문에 참여하실 수 있습니다.

- 1) 여성일 경우
- 2) 대학교에 재학중인 학생일 경우
- 3) 나이가 18-25세 사이의 경우
- 4) 성경험이 있는 경우
- 5) 미혼일 경우
- 6) 이성애자인 경우
- 7) 한국어 소통이 가능한 자
- 8) 인터넷에 접속이 가능한 자

만약 귀하가 위 항목들에 모두 해당 된다면 "예"를 눌러 설문을 계속 진행 주시기 바랍니다.

만약 한가지의 항목이라도 해당이 되지 않는다면 "아니오"를 눌러 주시기 바랍니다.

☐ 예

☐ 아니오

설문조사를 시작하기 전에 아래
"나는 로봇이 아닙니다"를 체크해
주시시오.

2019. 11. 21.

Qualtrics Survey Software

☐ I'm not a robot



 reCAPTCHA

Privacy - Terms

현재 귀하의 연령은 어떻게 되나요? (만 나이로 적어주시기 바랍니다.)

귀하의 학년은 어떻게 되나요?

1학년

☐

2학년

☐

3학년

☐

4학년

☐

귀하의 전공은 무엇인가요?

인문, 사회과학

☐

자연과학 및 공학

☐

의약계열 (간호학 포함)

☐

예체능

☐

기타

☐

귀하의 종교는 무엇인가요?

기독교

☐

천주교

☐

불교

☐

무교

☐

기타

☐

귀하는 현재 어디에서 거주하나요?

자택

☐

친척집

☐

하숙집

☐

자취

☐

기숙사

☐

기타

☐

성과 관련된 행동에 대한 가족의 허용도는 어떠합니까?

보수적이다

☐

보통이다

☐

개방적이다

☐

대학생이 된 이후의 성교육 경험이 있습니까?

2019. 11. 21.

Qualtrics Survey Software

예



아니오



귀하는 과거에 성관계를 가진 적이 있습니까?

예



아니오



처음 성관계를 경험한 나이는 몇 세입니까?

10세 미만



11-15세



16-20세



21-25세



지난 6개월 동안 성관계 시 (남성) 콘돔 사용의 빈도는 얼마나 됩니까?

전혀없음 (0%)



드물게 (25%)



때때로 (50%)



자주 (75%)



항상 (100%)



지난 3 개월 간 성관계 경험이 있습니까?

있다



없다



지난 3 개월 동안 성 파트너 수는 몇 명입니까?

1명



2-3명



4명 이상



지난 6개월 동안의 성적 파트너 유형을 어떻게 정의할 수 있습니까?

안정적인 (일관된) 파트너



우연한 (캐주얼한) 파트너

예기치 못한 파트너 (일회성의
원나잇 파트너)

2019. 11. 21.

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귀하는 과거 성병에 걸린 경험이 있습니까?

예



아니오



귀하는 과거 원치 않는 임신을 한 경험이 있습니까?

예



아니오



귀하는 파트너로부터 성관계를 강요받은 적이 있습니까?

예



아니오



남성과 여성에 관한 아래의 보편적인 개념들에 대해 귀하가 평소 생각하는 대로 해당 칸에 체크를 해주시기 바랍니다.

*설문지에서 "콘돔"은 남성 콘돔 (여성 페미돔 아님)을 지칭합니다.

	전혀 그렇지 않다	그렇지 않다	보통이다	대체로 그렇 다	매우 그렇다
1. 여성이라면 남성보다 성경험이 적어야 한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. 성적으로 적극적인 여성은 바람직하지 않다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. 여성은 쉽게 (또는 헤프게) 보여서는 안 된다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. 남성이 여성에게 성 에 대해 가르칠 수 있 으려면 성경험이 있어 야 한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	전혀 그렇지 않다	그렇지 않다	보통이다	대체로 그렇 다	매우 그렇다
5. 여성은 일회성의 성 관계를 가져서는 안 되고, 남성은 그래도 괜찮다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. 남성은 성적인 경험을 쌓는다는 의미에서, 여러 여성과 성 관계를 가지는 것이 필요하다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. 성관계에서 남성은 주도적인 역할을, 여성은 수동적인 역할을 해야 한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. 여성이 콘돔을 가지고 다니는 것은 괜찮다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. 여성이 여러 남성과 성 관계를 가지는 것은 남성이 여러 여성과 성 관계를 가지는 것보다 나쁘다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. 성관계는 남성이 먼저 주도적으로 시작해야 한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

다음은 이성과의 성 접촉 시 귀하의 반응에 관한 질문입니다. 귀하의 가장 최근 또는 현재의 이성교제시의 행동과 유사하다고 생각한 항목에 체크를 해주시기 바랍니다.

*설문지에서 "콘돔"은 남성 콘돔 (여성 페미돔 아님)을 지칭합니다.

	전혀 그렇지 않다 (0%)	가끔 그렇다 (25%)	때때로 그렇 다 (50%)	자주 그렇다 (75%)	항상 그렇다 (100%)
1. 나를 애무해달라고 파트너에게 표현한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. 원하는 부위에 애무 해주길 기다린다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. 성기를 애무해달라고 파트너에게 표현한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. 파트너가 성기를 애무 해주길 기다린다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	전혀 그렇지 않다 (0%)	가끔 그렇다 (25%)	때때로 그렇 다 (50%)	자주 그렇다 (75%)	항상 그렇다 (100%)
5. 성관계를 원하면 파트너에게 표현한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. 여성이 애무를 요구하기 보다는 남자가 해주길 기다려야 한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. '싫다'라고 의사를 표현했더라도 파트너가 강요하면 나는 키스한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. 파트너가 가슴을 만지려 할 때에 내가 싫으면 거절한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. 파트너가 성기를 만지려 할 때에 내가 싫으면 거절한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. 싫더라도 파트너의 요구에 따라 애무해준다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. 싫더라도 파트너가 원하면 성관계를 갖는다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. 파트너가 성관계를 요구하더라도 내가 싫으면 거절한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. 나와 파트너가 성관계를 원하면 콘돔 없이 성관계를 한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. 성관계를 할 때 콘돔을 사용한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. 성관계를 갖기 싫어도 파트너가 요구하면 콘돔 없이 성관계를 한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. 콘돔을 사용하고 싫어도 파트너가 콘돔을 싫어하면 그냥 성관계를 갖는다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. 파트너가 콘돔을 싫어해도 내가 원하면 콘돔을 사용한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	전혀 그렇지 않다 (0%)	가끔 그렇다 (25%)	때때로 그렇 다 (50%)	자주 그렇다 (75%)	항상 그렇다 (100%)
18. 파트너가 콘돔 사 용을 거절하면 나는 성관계를 갖지 않는 다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

전반적으로 당신의 성 파트너와의 성 관계를 어떻게 설명/묘사 하시겠습니까?
귀하가 평소 생각하는 대로 해당 칸에 체크를 해주시기 바랍니다.

1) 아주 나쁨	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	아주 좋음
2) 매우 불편한	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	매우 즐거운
3) 아주 부정적인	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	아주 긍정적인
4) 매우 불만족	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	매우 만족
5) 아주 쓸모없는	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	매우 귀중한

다음은 **당신의 신념**에 관한 질문입니다.
귀하가 평소 생각하는 대로 해당 칸에 체크를 해주시기 바랍니다.

*설문지에서 "콘돔"은 남성 콘돔 (여성 페미돔 아님)을 지칭합니다.

	전혀 그렇지 않다	그렇지 않다	그렇다	매우 그렇다
1. 나는 내 또래의 사 람들이 성관계를 가지 려면 적절한 나이가 될 때까지 기다려야 된 다고 생각한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	전혀 그렇지 않다	그렇지 않다	그렇다	매우 그렇다
2. 나는 내 또래의 사람들이 그들의 이성 친구(연인)와 성관계를 갖는 것은 괜찮다고 생각한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. 나는 내 또래의 사람들이 성관계를 가진다면 항상 콘돔을 사용해야 된다고 생각한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. 나는 내 또래의 사람들이 성관계를 가진다면 여성이 피임약을 복용했다 하더라도 항상 콘돔을 사용해야 된다고 생각한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. 나는 내 또래의 사람들이 성관계를 가진다면 서로에 대해 충분히 알고 있다고 하더라도 항상 콘돔을 사용해야 된다고 생각한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

다음은 **당신 주위 친구들의 신념**에 관한 질문입니다.
귀하가 친구들의 신념에 대해 정확하게 모른다고 할지라도 그들의 신념을 가장 잘 설명하고 있다고 생각하는 칸에 체크를 해주시기 바랍니다.

*설문지에서 "콘돔"은 남성 콘돔 (여성 페미돔 아님)을 지칭합니다.

	전혀 그렇지 않다	그렇지 않다	그렇다	매우 그렇다
1. 나의 친구들은 그들과 비슷한 또래의 사람들이 성관계를 가지려면 적절한 나이가 될 때까지 기다려야 된다고 생각한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. 나의 친구들은 그들과 비슷한 또래의 사람들이 그들의 이성 친구(연인)와 성관계를 갖는 것은 괜찮다고 생각한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	전혀 그렇지 않다	그렇지 않다	그렇다	매우 그렇다
3. 나의 친구들은 그들과 비슷한 또래의 사람들이 성관계를 가진다면 항상 콘돔을 사용해야 된다고 생각한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. 나의 친구들은 그들과 비슷한 또래의 사람들이 성관계를 가진다면 여성이 피임약을 복용했다 하더라도 항상 콘돔을 사용해야 된다고 생각한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. 나의 친구들은 그들과 비슷한 또래의 사람들이 성관계를 가진다면 서로에 대해 충분히 알고 있다고 하더라도 항상 콘돔을 사용해야 된다고 생각한다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

다음은 **성행동과 관련된 자기 효능감**에 관한 질문입니다.
만약 귀하가 아래와 같은 상황에 처해 있다고 가정해 보았을 때, 귀하가 평소 생각하는 대로 해당 칸에 체크를 해주시기 바랍니다.

*설문지에서 "콘돔"은 남성 콘돔 (여성 페미돔 아님)을 지칭합니다.

	전혀 확신하지 못한다	약간 확신한다	매우 확신한다
1. 모임에서 만난 상대가 나와 성관계를 갖고 싶어 합니다. 상대가 매우 매력적이게 느껴지지만 나는 아직 성관계를 가질 준비가 되지 않았습니다. 이때, 당신은 상대에게 성관계를 갖는 것을 거절할 수 있다고 얼마나 확신합니까?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2019. 11. 21.

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전혀 확신하지 못한다

약간 확신한다

매우 확신한다

2. 나와 나의 이성 친구
(연인)는 현재 사귀고
는 있지만, 성관계를
가진 적은 없습니다.
상대는 성관계를 갖길
원하지만 나는 아직 준
비가 되지 않았습니다.
이때, 당신이 준비가
되기 전까지 성관계를
갖지 않을 것이라고 얼
마나 확신합니까?



3. 나와 나의 이성 친구
(연인)는 성관계를 갖
기로 했지만, 상대방이
콘돔 사용을 원치 않는
다고 합니다. 나는 콘
돔 없이는 성관계를 갖
고 싶지 않습니다. 이
때, 당신은 상대방이
콘돔 사용에 동의 할
때까지 성관계를 갖지
않을 것이라고 얼마나
확신합니까?



4. 나와 나의 이성 친구
(연인)는 이전에 성관
계를 가질 때 콘돔을
사용하지 않았습니다.
이제부터 나는 콘돔을
사용하고 싶습니다. 이
때, 당신은 상대방에게
콘돔을 사용하기 원한
다고 말할 수 있다고
얼마나 확신합니까?



5. 방금 만난 사람과 하
룻밤의 성관계를 가지
기로 하였습니다. 나는
평소에 콘돔 사용이 중
요하다고 생각해왔습
니다. 이때, 당신은 상
대방에게 콘돔을 사용
하길 원한다고 말할 수
있다고 얼마나 확신합
니까?



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	전혀 확신하지 못한다	약간 확신한다	매우 확신한다
6. 나는 원치 않는 임신을 피하기 위해 피임약을 복용하고 있습니다. 나는 성병이나 HIV(혹은 에이즈) 감염을 예방하기 위해 콘돔을 사용해야 된다고 생각합니다. 이때, 당신은 상대방에게 콘돔 사용의 필요성에 대해 설득할 수 있다고 얼마나 확신하십니까?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. 당신은 정확한 방법으로 콘돔을 사용하거나 혹은 상대방에게 올바른 콘돔 사용법을 설명할 수 있다고 얼마나 확신하십니까?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. 당신은 만약 콘돔이 필요하다면, 매장(가게)에 가서 콘돔을 구입할 수 있다고 얼마나 확신하십니까?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. 만약 상대방과 성관계를 갖기로 했을 때, 필요 시 당신이 콘돔을 가지고 있을 것이라고 얼마나 확신하십니까?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

다음은 콘돔 사용과 관련된 신념에 관한 질문입니다.
귀하가 평소 생각하는 대로 해당 칸에 체크를 해주시기 바랍니다.

*설문지에서 "콘돔"은 남성 콘돔 (여성 페미돔 아님)을 지칭합니다.

	전혀 동의하지 않는다	약간 동의하지 않는다	약간 동의한다	매우 동의한다
1. 매장(가게)에서 콘돔을 구입하는 일은 망할 것이다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. 콘돔을 소지하고 다니는 것이 불편하게 느껴진다.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2019. 11. 21.

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전혀 동의하지
않는다약간 동의하지
않는다

약간 동의한다

매우 동의한다

3. 콘돔을 가지고 다니는 것은 내가 성관계를 가질 계획이 있다는 것을 의미하기 때문에 올바른지 못하다.



귀하께서 위의 주제와 관련하여 추가적으로 중요하게 고려할 필요가 있다고 생각되는 의견이 있으면 간략하게 적어주십시오.

설문지의 마지막 페이지입니다. 본 설문에 참여해주신 감사의 의미로 소정의 선물 (3000원 상당의 기프티콘)을 드리
고자 합니다. 이에 동의하시면 아래에 링크를 클릭하여 이메일 주소를 남겨주시기 바랍니다. 연구에 참여해주셔서 대
단히 감사합니다.

https://uncg.qualtrics.com/jfe/form/SV_cRU6j1OpzjVqx6Z

연구에 참여할 수 있는 주변 사람을 알고 있다면 아래 링크를 공유해 주시거나 연구자의 이름과 연락 정보를 잠재적 참가자에게 전달해 주시기 바랍니다.

https://uncg.qualtrics.com/jfe/form/SV_bx3zw1drKZM0AN7

Powered by Qualtrics

APPENDIX C

PERMISSION TO USE DOUBLE-STANDARDS SCALE (DSS)

옥선화교수님께

Inbox x



Jungmin Lee <j_lee43@uncg.edu>
to swok5481 ▾

Thu, Dec 5, 2019, 2:49 PM



안녕하세요

저는 University of North Carolina at Greensboro 아동 간호 박사생 이정민 입니다.

다름이 아니라 박사 학위 논문으로 대학생을 대상으로 큰동 사용의도와 관련한연구를 진행하고 있는데 해당 연구에서 교수님께서 지도교수로 역할을 맡으셨던 남영주(2003) "삼, 사십대 기혼 남녀의 성 의미 유형과 결혼 만족"에서 사용하신 성 이중 기준 척도 (double standard scale)의 사용의 허가를 구하고자 연락드리게 되었습니다. 직접 남영주님께 연락을 드리려고 하였으나 15년이 지난 연구여서 연락처를 찾을 수가 없어 교수님께 연락을 드리게 되었습니다.

도구 중 일부를 사용해 주실 것을 허락해주시겠습니까?

허락해 주신다면 정말 감사드리며 연구에 잘 사용하도록 하겠습니다.

감사합니다.

이정민드림

--

Jungmin Lee, RN, MSN

Hello,

I am Jungmin Lee, a Ph.D. student in the school of nursing at the University of North Carolina Greensboro.

I am currently conducting research on condom use intentions among college students for my dissertation.

I am sending you this email to obtain permission to use the double standards scale which was used in "Nam (2003). Sexual meaning types and marital satisfaction of the married in their 30s and 40s (Unpublished doctoral dissertation). Seoul, Seoul National University." Since the DSS was translated into Korean in Nam's (2003) dissertation, I tried to contact Ms. Nam directly. However, I couldn't find a contact number since the study was conducted more than 15 years ago, and I had to contact you because you were her dissertation chair.

Would you allow me to use the DSS instrument?

Thank you very much for considering the permission and I will use it well for my research.

Thank you

Jungmin Lee

"옥선화" <swok5481@snu.ac.kr>
to me ▾

Dec 7, 2019, 6:18 AM ☆ ↶ ⋮

이정민선생님 반갑습니다. 해당 척도 사용을 허락합니다. 좋은 논문 작성하시기를 기대합니다. 옥선화 드림

Hello, Jungmin Lee. Nice to meet you. You may use the scale. I hope you will be able to succeed in your work.

Ok Sun-Hwa

APPENDIX D

PERMISSION TO USE SEXUAL ASSERTIVENESS SCALE (SAS)

장순복교수님께 Inbox xJungmin Lee <j_lee43@uncg.edu>
to csbok ▾

Thu, Dec 5, 2019, 2:37 PM



안녕하세요

저는 University of North Carolina at Greensboro 아동 간호 박사생 이정민 입니다.

다름이 아니라 박사 학위 논문으로 대학생을 대상으로 콘돔 사용의도와 관련한 연구를 진행하고 있는데 해당 연구에서 교수님께서 지도교수로 역할을 맡으셨던 최명현(2004) "여대생의 성적 자기주장 관련 요인"에서 사용하신 성적 자율성 도구의 사용의 허가를 구하고자 연락드리게 되었습니다. 직접 최명현님께 연락을 드리려고 하였으나 15년이 지난 연구여서 연락처를 찾을 수가 없어 교수님께 연락을 드리게 되었습니다.

도구 중 일부를 사용해 주실 것을 허락해주시겠습니까?

허락해 주신다면 정말 감사드리며 연구에 잘 사용하도록 하겠습니다.

감사합니다.

이정민드림

--

Jungmin Lee, RN, MSN

Hello,

I am Jungmin Lee, a Ph.D. student in the school of nursing at the University of North Carolina Greensboro.

I am currently conducting research on condom use intentions among college students for my dissertation.

I am sending you this email to obtain permission to use the sexual assertiveness scale which was used in "Choi (2005). Factors influencing sexual assertiveness among women college students (Unpublished master thesis). Seoul: Yonsei University."

Since the SAS was translated into Korean in Choi's (2005) thesis, I tried to contact Mr. Choi directly. However, I couldn't find a contact number since the study was conducted more than 15 years ago, and I had to contact you because you were his thesis chair.

Would you allow me to use the SAS instrument?

Thank you very much for considering the permission and I will use it well for my research.

Thank you

Jungmin Lee

장순복 <csbok@yuhs.ac>
to me ▾

Fri, Dec 6, 2019, 7:23 AM ☆ ↩ ⋮

이정민 선생님께!

공부하느라고 수고가 많으시군요!

제가 알기로는 도구사용은 전체를 그대로 사용할 때 허락이 필요하고,

부분을 발췌하여 여러내용을 통합하시는 도구개발의 경우는 참고문헌식으로 하시면 될 것입니다.

전체를 그대로 사용하신다고 해도 연구대상이 동일 그룹이면 괜찮을 것입니다

좋은 경험 되길 바랍니다.

장순복드림

Dear, Jungmin Lee

I assume that you are having a hard time studying!

As far as I know, the use of tools requires permission if you are using them without revising it.

In the case of slightly revising a tool, it is recommended to just cite in the reference list.

Even if you use the whole as it is, it will be fine if the subject is the same group.

I wish you will be having a good experience.

Jang Sun-bok

APPENDIX E

PERMISSION TO USE GLOBAL MEASURE OF SEXUAL SATISFACTION (GMSEX)

Jungmin Lee (asking for a permission for using GMSEX) Inbox x



Jungmin Lee <j_lee43@uncg.edu>

Fri, Sep 6, 2019, 3:44 PM



to byers ▾

Good morning, Dr. E. Sandra Byers

I am an international Ph.D. student in Nursing (the University of North Carolina at Greensboro). This is my third year and trying to get ready for the dissertation. My research interest is about risky sexual behaviors in young people.

I am sending you an email to you to get permission for using The *Global Measure of Sexual Satisfaction* (GMSEX). For now, I am planning to translate GMSEX tool into Korean and measure Korean college students' sexual satisfaction and validate the tool.

Thank you.

Best,

--

Jungmin Lee, RN, MSN

Sandra Byers <bayers@unb.ca>

Fri, Sep 6, 2019, 5:27 PM



to me ▾

I am happy for you to use the GMSEX. Good luck with your research.

E. Sandra Byers

Professor & Chair • **Department of Psychology**

Research Fellow, Royal Society of Canada

Past-President • **International Academy of Sex Research**

T 506 458-7803

<https://www.unb.ca/faculty-staff/directory/arts-fi-psychology/byers-sandra.html>



APPENDIX F

PERMISSION TO USE SEXUAL RISK BEHAVIOR BELIEFS AND SELF-EFFICACY SCALE (SRBBS)

Jungmin Lee (asking for a permission for using SRBBS) Inbox x



Jungmin Lee <j_lee43@uncg.edu>
to kbasenen ▾

Feb 8, 2019, 4:28 PM ☆ ↶ ⋮

Good morning, Dr. Basen-Engquist

I am an international Ph.D. student in Nursing (the University of North Carolina at Greensboro). This is my second year and trying to get ready for the dissertation. My research interest is about risky sexual behaviors in young people.

I am sending you an email to you to get permission for using the Sexual Risk Behavior Beliefs and Self-Efficacy Scales.

For now, I am planning to translate the SRBBS tool into Korean and measure Korean college students' intent to use condoms. Most studies show that condom use is poor for young South Korean, however, there was a limited study that describes their intent of using condoms and why participants did not use condoms during sexual intercourse. One reason for limited research in this area might be due to the lack of a tool to measure students' intention of using a condom with the factors that reflect the characteristics of Korean college students.

We thought this tool emphasizes all of the aspects of sexual risk-taking behaviors which would be applicable to measure the variables in our study.

This study will help to generate new knowledge and understanding about South Korean college students' intent to use condoms, and results from this study can inform a future intervention to minimize unprotected, risky sexual behaviors of Korean college students.

Thank you so much for your time

Please let me know if you have any question.

Have a great Friday

Best Regards,

--

Jungmin Lee, RN, MSN

Basen-Engquist, Karen M <kbasenen@mdanderson.org>
to me ▾

Feb 8, 2019, 4:41 PM ☆ ↶ ⋮

Yes, you may use the scales. Best of luck with your research.

Sent from my iPhone

On Feb 8, 2019, at 2:28 PM, Jungmin Lee <j_lee43@uncg.edu> wrote:

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